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NORTH CAROLINA  
DEPARTMENT OF CONSERVATION AND DEVELOPMENT

R. BRUCE ETHERIDGE, DIRECTOR

DIVISION OF WATER RESOURCES AND ENGINEERING

W.H.RILEY, PRINCIPAL ENGINEER

---

**HYDROLOGIC DATA**  
**ON THE**  
**CAPE FEAR RIVER BASIN**  
**1820-1945**

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PREPARED IN COOPERATION WITH  
UNITED STATES GEOLOGICAL SURVEY  
AND UNITED STATES WEATHER BUREAU  
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**DEPARTMENT OF CONSERVATION AND DEVELOPMENT**

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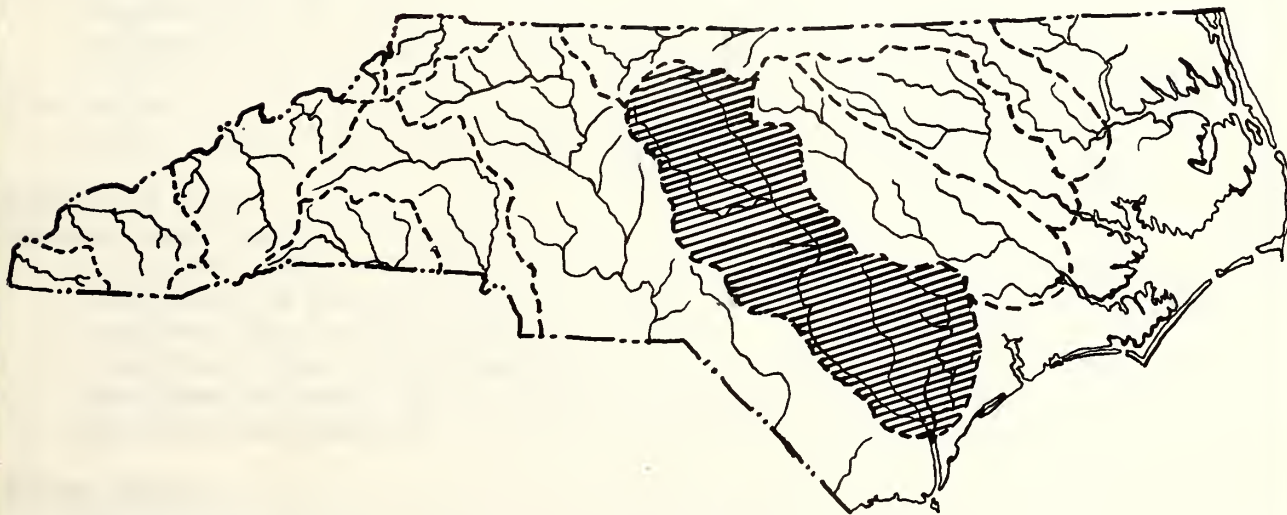
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LECTURE NOTES

BY

ROBERT H. SPENCER



# CONTENTS

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[2]

	Page
Foreward.....	1
Acknowledgment.....	2
Description of Water-Shed.....	3
Stream Flow.....	5
Stream Gaging Stations	
Bear Creek at Robbins, N. C. ....	8
North Fork Buffalo Creek near Greensboro, N. C. ....	11
South Fork Buffalo Creek near Greensboro, N. C. ....	15
Cape Fear River at Fayetteville, N. C. ....	19
Cape Fear River at Lillington, N. C. ....	27
Cape Fear River at Lock #3, near Tarheel, N. C. ....	31
Deep River at Moncure, N. C. ....	34
Deep River at Ramseur, N. C. ....	37
Deep River near Randleman, N. C. ....	41
East Fork Deep River near High Point, N. C. ....	45
West Fork Deep River near High Point, N. C. ....	49
Haw River near Benaja, N. C. ....	53
Haw River at Haw River, N. C. ....	57
Haw River near Pittsboro, N. C. ....	61
Horsepen Creek near Battle Ground, N. C. ....	65
Lower Little River at Linden, N. C. ....	69
Lower Little River at Manchester, N. C. ....	73
Northeast Cape Fear River near Chinquapin, N. C. ....	76
Reedy Fork near Gibsonville, N. C. ....	79
Rockfish Creek near Hope Mills, N. C. ....	83
Miscellaneous Measurements in Cape Fear River Basin ....	86
Climatological.....	89
Chapel Hill, N. C. ....	94
Fayetteville, N. C. ....	101
Reidsville, N. C. ....	107
Wilmington, N. C. ....	111
Evaporation	
Chapel Hill, N. C. ....	118
Quality of Water .....	119
Chemical Analyses	
Cape Fear River at Wilmington, N. C. ....	120
Deep River at Moncure, N. C. ....	121
Cape Fear River at Lillington, N. C. ....	122
Cape Fear River at Fayetteville, N. C. ....	123
Haw River at Bynum, N. C. ....	124
Miscellaneous Analyses in Cape Fear River Basin ....	125
Ground Water .....	126
Introduction .....	127
Occurrence of ground water .....	127
Fluctuations of the water table .....	128
Geology and ground-water resources of the Piedmont area .....	135
Gneiss (pre-Cambrian (?)) .....	138
Slate and schist (pre-Cambrian (?)) .....	138
Granite (Carboniferous (?)) .....	139
Neward Group (Triassic) .....	139
Public ground-water supplies in the Piedmont section .....	140
Geology and ground-water resources of the Coastal Plain .....	141

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## CONTENTS (Continued)

	Page
Upper Cretaceous series .....	143
Tuscaloosa formation .....	143
Black Creek formation .....	143
Peedee formation .....	144
Eocene series .....	144
Beds of Black Mingo age .....	144
Castle Hayne marl .....	144
Miocene series .....	145
Trent marl .....	145
Duplin marl .....	145
Pleistocene deposits .....	145
Public ground-water supplies in the Coastal Plain area .....	145
Table of analyses of water from the Piedmont section of the Cape Fear River Basin .....	149
Table of analyses of water from wells in the Coastal Plain section of Cape Fear River Basin .....	150
Partial analyses of water from wells in the Piedmont section of Cape Fear River Basin .....	151
Partial analyses of water from wells in the Coastal Plain section of Cape Fear River Basin .....	151
Records of wells in the Cape Fear River Basin .....	153

## MAPS AND CHARTS

Stream Gaging Stations in Cape Fear River Basin .....	6
Map of Cape Fear River Basin showing Stream Gaging Stations .....	7
Rainfall Stations in Cape Fear River Basin .....	90
Map of Cape Fear River Basin showing Mean Annual Rainfall Isohyetals .....	91
Temperature Stations in Cape Fear River Basin .....	92
Map of Cape Fear River Basin showing Mean Annual Temperature Isotherms .....	93
Geologic Map of Cape Fear River Basin .....	126
Cross section of the Coastal Plain showing the Geologic formations .....	137
Map of North Carolina showing where ground-water investigations have been made .....	142



## FOREWARD

Water is one of the greatest natural resources in the Cape Fear River Basin. No other resource is more abundant or can serve the public in more beneficial ways. Although it is used for more purposes and is more abundant, there is no other resource subject to as much abuse. With wise planning water can be made man's best servant, but without wise planning it can be man's greatest enemy. Every drop of water that passes to the sea is a loss to the public unless it has given up its full usefulness to mankind. By planning the uses of our great resource, it can be made to serve a larger number of people to better advantages and pay larger dividends to the whole State.

Large industries, power plants, and other large users of water have now taken practically all of the locations when there is no question about the amount of water for their uses. Today smaller water-sheds are being developed and without records it is impossible to estimate, with any degree of certainty, the flow that can be depended upon. It is useless to think that industry will make a large investment at any site unless it can be assured of having sufficient water to meet its demands at all times.

Industry is one of the backbones of our civilization. It furnishes employment for the citizens of a community as well as helps support the city, county, and State government. Water is required by most industries either to furnish power or to help in the processing of the raw materials. Rigid requirements are made of water in both quantity and quality. Since most industries must run during all periods of the year and some of the elements present in the water will damage the final product, all data possible should be readily available for their use. As industry grows in the State, municipalities will also increase. Some will need to expand their present plants, others will need to build plants, and still others may need to change from ground water to surface water. In all of these instances the information in this publication will be found very helpful.

Weather conditions often have their effects upon industry and will be the deciding factor in their location. Although the records of only four Weather Bureau Stations are published in this publication, a good picture of the conditions throughout the whole basin can be obtained from this data.

Quality of water is playing a large part every day in the selection of sites for industrial and domestic use. Certain elements can be very harmful to the final products of a great number of manufacturers and may be very costly to remove. Such industries are greatly benefited in selecting their locations if such information can be made available readily. The Cape Fear River and its tributaries are blessed with water suitable for the manufacturing of most products. Small users of water will find analyses of some of the public water supplies very useful.

The purpose of this publication is not to supply all the information collected in the Cape Fear River Basin, but to make available under one cover the information that can be readily used by anyone. Several Weather Bureau stations as well as several stream flow stations are omitted as they make the publication unnecessarily

bulky and might be misleading to those that are not working with such data constantly. Full information can be obtained on these stations from either the Division of Water Resources and Engineering of the Department of Conservation and Development, Raleigh, North Carolina, or the cooperating agencies of the U. S. Geological Survey, Raleigh, North Carolina, and U. S. Weather Bureau, Raleigh, North Carolina.

Records of stream flow in this report have been compiled from records of the Water Resources Branch of the U. S. Geological Survey. Some of these records are revised records and have not yet been published in the Water-Supply Papers of the U. S. Geological Survey. Differences may be found between values published in this report and official publications of the U. S. Geological Survey and the records presented herein are believed to be the latest revised values. In such cases the matter should be checked with the district office of the Water Resources Branch, U. S. Geological Survey, Raleigh, North Carolina.

#### ACKNOWLEDGMENT

Grateful acknowledgment is made to Mr. E. D. Burchard, of the U. S. Geological Survey, for supplying information related to stream flow; to Mr. W. L. Lamar, District Chemist of the U. S. Geological Survey, for supplying information on quality of water; to Mr. M. J. Mundorff, Resident Geologist of the U. S. Geological Survey, for supplying information on ground water; to Mr. C. E. Lamoureux, Section Director of U. S. Weather Bureau, for supplying information on rainfall and temperature; and to Miss Sallaine Sledge, who has prepared the copy for the printers as well as assisted in collecting the data.



## DESCRIPTION OF WATER-SHED

The drainage basin of the Cape Fear River is the largest river basin lying entirely within the borders of North Carolina, having a drainage area of approximately 8,570 square miles. The drainage basin is oblong in shape, its greatest width being about 60 miles and length of about 200 miles. It flows in a general southeasterly direction from the Piedmont region through the Coastal Plain and empties finally into the Atlantic Ocean at Cape Fear, about 25 miles below Wilmington. The main stream and its principal tributary, the Haw River, flows comparatively close to the northern boundary of the water-shed above the lower boundary of the "fall zone". Below the "fall zone" the main stream makes a decided curve to the southwest and below the mouth of Rockfish Creek it flows very near to the Southern divide.

The Cape Fear River is formed by the confluence of the Deep and Haw Rivers in Chatham County, in the east central portion of North Carolina. These streams rise in the Piedmont Plateau in the central part of the State, which is a belt of hills and valleys and rolling uplands lying between the Appalachian Mountains on the west and the low plains along the coast.

The total fall of the Cape Fear River from its furthestmost source to its mouth is approximately 1000 feet. Its fall by long reaches is as follows: From its furthestmost source to Buckhorn Falls, which are a short distance below the beginning of the main stream, 840 feet; Buckhorn Falls, 21 feet; from these falls to the head of Smiley Falls, 47 feet; Smiley Falls, 39 feet; from this point to Fayetteville, 30 feet; and from Fayetteville to the mouth of the main stream, 21 feet. The gradient of the Deep and Haw Rivers are very steep, consisting largely of a series of pools, rapids and falls. That of the main stream through the "fall zone" is similar to those of its two source tributaries. Below this zone the characteristics of the main stream change, and it becomes a typical coastal stream with a flat gradient. It leaves the "fall zone" near the mouth of Lower Little River. The fall of the stream is regulated during low and moderate stages by three Government navigation dams below Fayetteville. The tidal reach extends from the mouth of the stream up its channel for about 70 miles.

Northeast River or Northeast Cape Fear River, as it is also called, is the largest tributary of the Cape Fear River and the first tributary of importance as the stream is ascended. This stream has its source in Duplin County, in the Coastal Plain, and flows in a general southerly direction joining the main stream from the left bank of Wilmington. The elevation of the source of Northeast River is about 200 feet. It empties into the Cape Fear River at slightly above sea level and has a tidal reach which extends up its channel for approximately 50 miles. Its gradient is uniform and flat. The drainage area of the Northeast River is approximately 1,710 square miles.

Black River, another important tributary of the Cape Fear, is formed by the confluence of Little and Great Coharie Creeks, in Sampson County. It has one other important tributary, the South River, which joins it in its lower reaches. Most of the territory drained by the Black River lies in the Coastal Plains, only the South River extending into the "fall zone". The "fall zone" is a region some 30 to 40 miles in width which forms the boundary between the Piedmont Plateau and Coastal Plains. The Black River flows in a southeasterly direction, joining the Cape Fear River from the left bank about 14 miles above Wilmington. The elevation of the source of the stream is approximately 200 feet above mean tide, but the South River

extends to an altitude of about 400 feet. The Black River joins the Cape Fear River at slightly above sea level. It has a tidal reach which extends up its channel for about 24 miles. The fall of the stream throughout is uniform. The basin drained by the Black River has an area of approximately 1,410 square miles.

Rockfish Creek, an important tributary of the Cape Fear because of its developed power, rises in the "Sand Hill" region of Moore County near the town of Southern Pines. (The "Sand Hill" region is a subdivision of the Coastal Plains bordering on the Piedmont Plateau and so named for its rolling sand hills.) It flows in a general easterly direction, being joined by its principal tributary, Little Rockfish Creek, a short distance above its mouth. It empties into the Cape Fear River about 6 miles below Fayetteville. The elevation of the source of the stream is about 500 feet and of its mouth 21 feet above mean sea level. This stream has an unusually uniform flow and gradient. The total drainage area of Rockfish Creek is 303 square miles.

Lower Little River is also an important tributary of the Cape Fear from the standpoint of power development. This stream rises in the same locality as Rockfish Creek and is another typical "Sand Hill" stream. It also flows in an easterly direction, joining the Cape Fear 21 miles above Fayetteville. The elevation of its source is approximately the same as that of Rockfish Creek. It empties into the main stream at an elevation of about 50 feet. This stream has a gradient and flow similar to Rockfish Creek. Lower Little River drains an area of 477 square miles.

Deep River, the lesser of the two source tributaries of the Cape Fear River, rises near Kernersville in Forsyth County in the central Piedmont region. This stream flows in a southeasterly direction to the point where it enters Moore County where it makes an abrupt bend to the east and from this point to its junction with the Haw River its course is, in general easterly. The elevation of its source is approximately 1,000 feet, and of its mouth 158 feet. The stream has a very steep gradient, and throughout its length there are numerous falls and rapids. Its only important tributary is Rocky River, which joins it from the left bank near its mouth. The total drainage area of the Deep River is approximately 1,390 square miles.

Haw River, the principal source tributary of the Cape Fear River, has its beginning also in Forsyth County near the source of Deep River. It flows first in a northeasterly direction, then easterly, and finally southeasterly, which latter course it maintains for the greater part of its length. The elevation of the source of the Haw River is approximately the same as that of the Deep River. The Haw River also has a very steep gradient, the fall of the stream near its mouth being much greater than that in the corresponding section of the Deep River. Its only important tributary is New Hope River, which joins it near its junction with the Deep River. The total drainage area of the Haw River is 1,760 square miles.



## STREAM FLOW

Records of the flow of the Cape Fear River and its tributaries have been recorded by a total of 26 gaging stations. In this publication will be found records from 19 of these stations. It was decided to omit the other 7 as their records have been discontinued and did not run for as much as 10 years. From past experience it has been found that short records are very misleading and often give the wrong conception of the flow that can be expected. All records of discharge of the stations listed can be obtained from the Division of Water Resources and Engineering, Department of Conservation and Development, Raleigh, North Carolina; or the U. S. Geological Survey, Surface Water Branch, Raleigh, North Carolina.

The Cape Fear River at Fayetteville record is one of the longest in the State. This record was started in 1889 and has run continuously, except from August 24, 1917 to September 1, 1928, until 1940. The station at Lock Number 3 was established October 1, 1937, and is now used to supplement the record at Fayetteville. A good correlation can be made between these stations by comparing the flow for the years 1937 through 1940.

The Cape Fear River Basin may be divided topographically into three physical divisions: the Piedmont Plateau, the Sand Hill, and the Coastal Plain regions.

The Piedmont Plateau region extends across the central part of North Carolina and intercepts approximately the upper half of the basin. This region consists largely of rolling hills and deeply eroded valleys. The lower limit of the Piedmont Plateau region in the basin may be described as a southwest line across the basin, defined roughly by the main line of the Seaboard Railway. The elevation of the Piedmont Plateau in the Cape Fear River Basin varies from 1,000 feet above sea level in the Northernmost part to 300 feet where it joins the Sand Hill region.

The Sand Hill region is in reality a subdivision of the Coastal Plain region. Its area in the Cape Fear River Basin is a wedge-shaped formation, and it lies between lines roughly defined by the Seaboard Air Line Railway and the Atlantic Coast Line Railroad. Its elevation varies from 300 feet above sea level to 150 feet, and its surface features are more rolling than that of the Piedmont Plateau region. The stream valleys are comparatively shallow, and only the main stream has cut through the softer deposits to the basement rocks below.

The lower part of the basin lies in the Coastal Plain region, a gently rolling terrain gradually flattening out towards the coast. Here in this region the stream valleys are wide, with much swamp and marsh land, and as a consequence, large areas are subject to overflow. The slope or gradients of the rivers and streams in this region are very flat, that of the main stream being 0.02 feet per mile for some 70 miles above the ocean.

**SHOWING RECORDS AVAILABLE**

1855	1865	1875	1885	1895	1905	1915	1925	1935	1945
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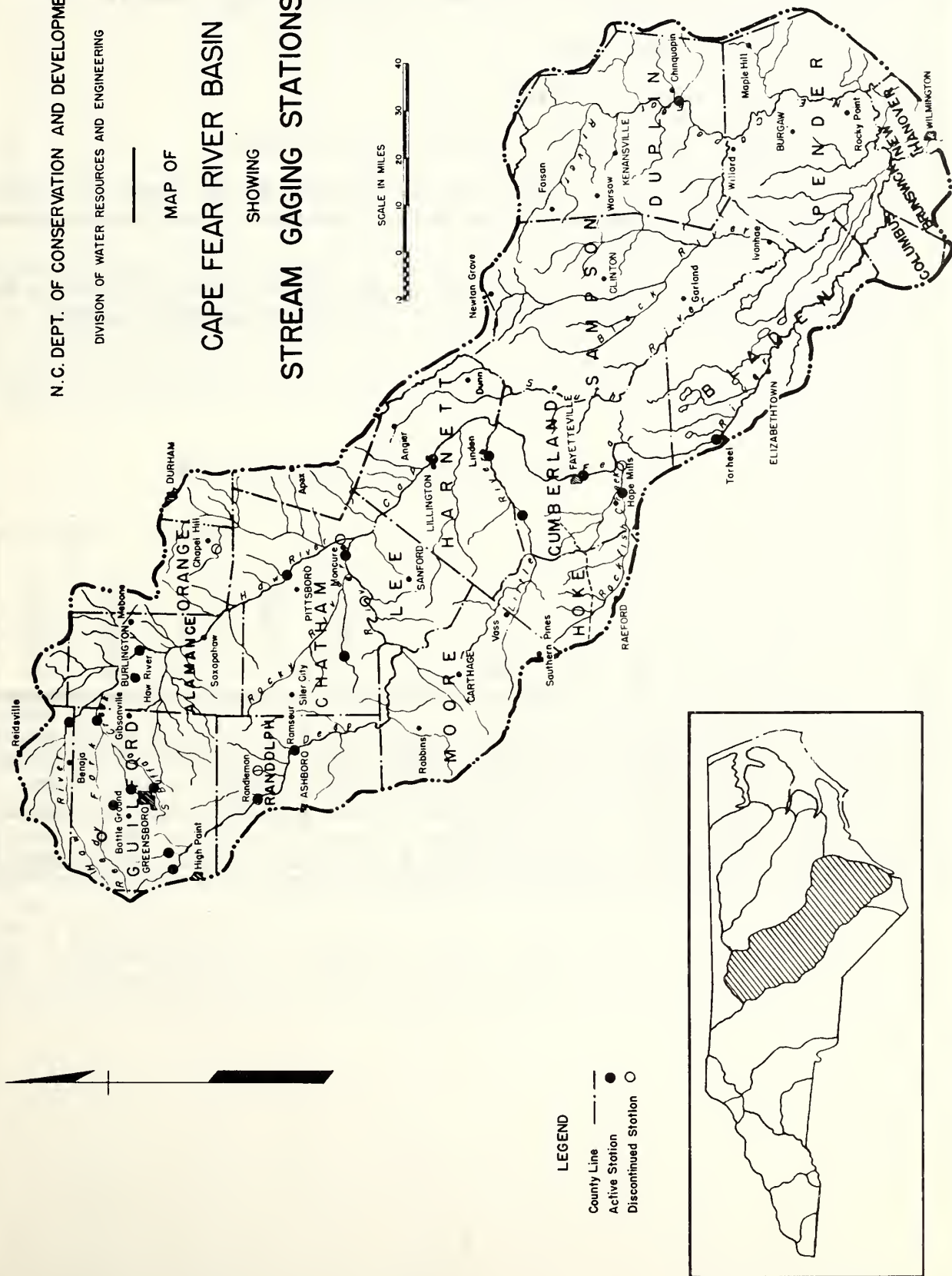
DIVISION OF WATER RESOURCES AND ENGINEERING

MAP OF

CAPE FEAR RIVER BASIN

SHOWING

STREAM GAGING STATIONS



Bear Creek at Robbins, N. C.

Location.- Water-stage recorder, lat. 35°25'40", long. 79°35'40", just downstream from Cabin Creek and half a mile west of Robbins, Moore County.

Drainage area.- 134 square miles.

Records available.- November 1939 to date.

Average discharge.- 6 years, 83.2 million gallons per day.

Extremes.- Maximum discharge, 17,400 million gallons per day, Sept. 18, 1945; (gage height 32.02 feet); minimum discharge, no flow Oct. 2, 22-27, 1941; (gage height 1.98 feet, Aug. 3, 1942).

Remarks.- Some diurnal fluctuation caused by mills above station. Records include a small diversion by town of Robbins for its municipal water supply.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1939												22.5	
1940	45.2	109	93.7	81.4	52.3	24.0	4.43	67.2	3.72	2.08	56.8	44.6	48.4
1941	53.6	39.7	109	165	18.0	10.7	29.3	2.82	2.18	10.1	3.40	33.5	39.7
1942	22.5	121	182	49.7	140	42.6	24.7	39.7	40.9	23.7	47	109	70.4
1943	209	145	174	153	37.9	18.4	151	11.8	8.08	4.94	5.38	30.0	78.8
1944	121	207	323	201	75.6	16.2	242	32.9	81.4	70.4	52.3	58.1	123
1945	78.8	180	73.0	49.1	23.8	7.2	83.3	105	680	82.0	52.9	266	139



Bear Creek at Robbins, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1939												135	
1940	355	452	458	265	548	134	9.7	866	21	4.85	678	238	866
1941	209	184	937	1700	39	83	141	9.0	6.1	232	9.7	401	1700
1942	108	1730	1180	405	2160	183	160	379	264	128	629	606	2160
1943	1390	1690	1120	1830	92	89	672	74	59	12	16	382	1830
1944	1470	762	2930	1870	659	40	3760	186	1560	924	526	140	3760
1945	261	775	229	426	70	21	1070	1050	7820	405	74	1340	7820

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1939												6.3	
1940	9.7	25	44	37	16	3.7	1.4	0.78	1.6	1.3	2.6	11	0.78
1941	21	22	26	31	7.8	3.5	4.8	1.1	.13	0.0	1.3	2.4	0.0
1942	6.4	11	36	19	9.0	13	3.5	2.5	2.2	3.7	9.7	36	2.2
1943	50	49	49	54	16	3.6	15	2.0	1.9	1.9	1.9	4.5	1.9
1944	23	25	66	70	20	5.8	10	9.0	6.5	19	18	36	5.8
1945	40	36	40	22	8.4	1.6	2.0	9.0	13	47	44	48	1.6

Bear Creek at Robbins, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1939	1940	1941	1942	1943	1944	1945
Jan. 7		14	78	37	69	145	114
14		52	28	9.0	88	55	81
21		98	59	14	460	293	85
28		26	55	19	221	34	53
Feb. 4		26	34	50	137	26	39
11		164	27	78	373	206	50
18		92	74	286	74	318	285
25		136	28	50	59	139	264
Mar. 4		86	34	291	52	198	184
11		57	172	291	282	198	85
18		162	49	57	79	286	55
25		57	47	131	281	672	52
Apr. 1		98	267	87	109	249	51
8		69	392	37	59	101	36
15		132	80	111	116	458	30
22		84	42	33	387	153	27
29		48	114	22	75	118	105
May 6		33	33	19	49	145	36
13		24	21	14	50	99	23
20		21	16	165	34	39	34
27		30	11	391	32	49	14
June 3		150	21	50	16	21	9.0
10		25	12	60	20	19	9.0
17		39	7.1	63	37	19	5.5
24		11	4.5	28	11	15	8.4
July 1		5.4	9.0	19	175	15	5.9
8		5.9	39	39	209	21	24
15		5.4	45	36	304	756	23
22		5.2	29	7.1	110	223	110
29		2.2	14	23	28	37	198
Aug. 5		1.4	4.1	8.4	13	93	66
12		1.1	4.7	21	21	41	21
19		279	1.9	85	11	17	44
26		12	2.1	55	4.7	10	327
Sept. 2		5.3	1.6	16	9.0	12	25
9		3.4	4.3	61	4.5	8.4	34
16		3.4	3.7	26	5.2	61	630
23		2.8	.46	4.5	17	32	2160
30		5.2	.50	75	6.5	244	78
Oct. 7		2.9	.65	8.4	4.5	45	130
14		1.6	.39	9.7	5.2	23	63
21		1.7	.13	30	5.8	186	57
28		1.9	33	50	3.9	44	93
Nov. 4		6.1	16	16	5.2	29	51
11		4.8	4.5	26	7.8	26	48
18		202	2.6	16	5.8	23	52
25		17	1.9	120	3.9	25	56
Dec. 2	9.7	19	1.8	61	4.5	159	54
9	9.0	13	14	165	9.0	67	313
16	9.0	30	10	52	6.5	68	140
23	12	49	30	76	7.1	41	101
31	59	89	83	158	96	48	532
Maximum		279	392	391	460	756	2160
Minimum		1.1	.13	4.5	3.9	8.4	5.5

North Fork Buffalo Creek near Greensboro, N. C.

Location.- Water-stage recorder, lat. 36°07'10", long. 79°42'35", at county highway bridge 3 miles upstream from mouth and 6 miles northwest of Greensboro, Guilford County.

Drainage area.- 36.4 square miles.

Records available.- August 1928 to date.

Average discharge.- 17 years, 28.7 million gallons per day.

Entremes.- Maximum discharge, 2,490 million gallons per day, Sept. 18, 1945; (gage height, 14.40 feet); minimum discharge, 1.0 million gallons per day, Aug. 28, 1932.

Remarks.- Diurnal fluctuation at low flow caused by mills above station. Sewage from Greensboro and Proximity Mills enters above station.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1928									95.0	12.0	10.6	11.2	
1929	13.0	78.8	56.7	42.4	27.9	33.4	25.2	13.6	7.62	53.6	32.6	33.3	34.6
1930	52.1	39.0	21.5	19.2	18.9	15.7	13.5	9.81	5.56	4.98	10.8	22.2	19.3
1931	20.2	14.2	20.3	48.2	25.8	12.9	28.8	39.5	8.85	5.56	5.68	15.2	20.5
1932	46.0	29.3	54.7	19.1	11.2	32.6	7.24	5.04	20.0	42.9	39.7	67.2	31.3
1933	37.4	42.2	24.0	24.7	13.0	6.59	8.79	18.7	7.11	5.96	7.11	8.40	16.9
1934	11.1	39.0	57.0	44.6	26.2	39.3	36.1	12.9	35.7	10.9	25.5	43.6	31.7
1935	40.4	29.8	64.3	76.2	49.4	14.5	15.0	8.40	24.1	8.20	12.9	14.0	29.7
1936	118	84.0	73.6	97.5	12.9	30.5	27.1	15.0	20.1	34.7	13.6	40.7	47.2
1937	111	38.8	27.1	47.2	23.8	18.1	17.2	29.4	24.2	33.5	21.3	16.0	34.0
1938	33.5	19.1	26.4	16.7	10.5	18.5	23.3	11.6	6.38	10.2	29.7	35.6	20.2
1939	31.0	85.9	44.4	21.8	21.6	14.1	33.1	57.8	24.5	11.8	12.9	20.3	31.3
1940	22.7	50.1	25.5	22.4	28.1	19.1	19.1	50.9	15.8	7.69	44.8	26.9	27.6
1941	27.6	19.3	25.9	26.2	11.5	28.7	48.1	10.6	10.9	7.36	7.49	12.2	19.7
1942	12.2	30.6	44.3	13.1	36.5	42.5	17.3	15.0	12.9	15.4	11.4	29.7	23.4
1943	59.0	44.1	53.3	42.9	19.7	37.1	76.9	13.8	15.1	10.7	11.8	18.2	33.5
1944	41.7	51.7	82.0	61.0	18.7	14.9	14.9	12.5	24.9	24.8	26.2	26.6	33.0
1945	28.7	58.3	28.4	21.3	19.8	11.0	15.1	10.4	103	17.4	19.5	75.6	33.8



North Fork Buffalo Creek near Greensboro, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1928									891	25	15	21	
1929	28	782	434	388	115	180	213	69	13	724	113	172	782
1930	410	168	65	89	128	101	172	57	10	14	45	116	410
1931	82	26	110	293	163	81	164	293	53	9.7	8.4	63	293
1932	336	105	557	60	31	394	21	8.4	250	795	227	231	795
1933	264	162	159	146	39	12	39	72	17	17	17	36	264
1934	25	578	321	441	130	297	325	89	287	30	194	581	581
1935	305	131	443	533	274	41	38	21	353	13	39	62	533
1936	872	652	492	612	30	510	239	87	295	193	57	258	872
1937	388	116	52	333	102	83	116	136	204	275	121	33	388
1938	214	55	219	50	34	64	153	30	12	22	358	199	358
1939	224	379	246	61	222	43	216	444	309	49	32	165	444
1940	134	285	107	116	260	94	174	546	141	16	443	97	546
1941	116	89	150	121	21	459	386	31	65	14	10	33	459
1942	31	397	371	35	359	252	72	50	77	121	37	142	397
1943	625	453	397	557	72	203	1120	90	94	19	32	130	1120
1944	318	262	439	608	37	28	60	43	355	162	150	75	608
1945	94	233	78	52	68	15	158	48	1620	78	65	388	1620

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1928									11	7.8	9.7	9.0	
1929	9.7	9.0	18	12	9.7	9.0	7.8	5.9	4.8	7.8	11	14	4.8
1930	14	16	13	9.7	7.1	5.7	4.6	3.0	3.2	2.6	3.9	6.1	2.6
1931	9.7	9.0	10	14	7.1	5.5	6.3	6.1	3.9	3.4	3.2	5.3	3.2
1932	10	12	12	12	4.8	4.1	3.2	2.2	3.9	4.6	9.7	12	2.2
1933	17	17	12	10	5.5	3.6	3.7	4.6	3.1	3.4	4.5	4.5	3.1
1934	5.7	6.5	9.0	8.4	6.2	6.2	6.5	5.9	4.1	5.6	7.1	10	4.1
1935	14	14	16	17	14	6.2	7.1	4.7	4.5	6.5	7.1	7.8	4.5
1936	12	14	15	16	7.1	6.5	5.9	5.6	4.1	9.0	8.4	12	4.1
1937	22	21	15	15	9.7	7.1	7.1	4.7	6.2	8.4	10	10	4.7
1938	16	14	12	9.0	6.0	6.5	5.7	5.0	4.0	4.0	7.1	7.1	4.0
1939	16	18	15	12	6.3	5.2	4.7	6.5	7.1	5.7	7.1	7.8	4.7
1940	9.7	16	13	12	7.1	7.1	5.4	5.6	5.4	5.0	6.1	10	5.0
1941	16	11	10	10	6.2	6.5	7.1	5.9	4.5	4.4	4.7	6.2	4.4
1942	7.1	7.8	11	7.1	5.6	6.5	6.5	5.4	4.4	3.6	5.6	12	3.6
1943	9.7	13	16	14	11	10	12	6.1	7.1	7.1	6.5	6.1	6.1
1944	12	12	16	17	14	7.8	6.5	5.2	3.9	9.7	9.7	14	3.9
1945	16	14	17	13	13	6.1	5.2	5.5	5.2	10	12	16	5.2

North Fork Buffalo Creek near Greensboro, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Jan. 7		15	19	28	39	26	162	67	226	162
14		14	63	20	120	78	14	45	67	32
21		12	107	23	14	21	8.4	19	198	196
28		12	32	14	14	32	7.8	40	25	58
Feb. 4		12	63	10	49	20	14	16	54	72
11		34	43	13	19	37	8.4	19	52	42
18		36	34	17	37	61	9.7	62	205	26
25		46	19	16	25	50	17	19	34	47
Mar. 4		238	16	15	14	18	189	21	21	33
11		101	28	16	136	17	26	30	36	25
18		28	16	12	16	19	12	110	140	31
25		54	28	23	32	47	33	33	47	27
Apr. 1		27	16	43	58	16	107	178	98	17
8		16	35	124	19	16	19	74	276	44
15		25	16	21	20	35	111	39	94	23
22		88	14	28	13	36	39	105	21	19
29		45	12	19	20	16	14	28	19	107
May 6		27	16	19	13	17	9.7	17	16	30
13		34	17	40	17	17	8.4	67	16	17
20		21	32	14	10	9.7	43	58	12	39
27		30	9.7	38	7.8	7.1	23	72	11	18
June 3		30	15	21	6.4	10	47	15	9.7	13
10		31	38	9.7	5.9	7.1	116	17	10	33
17		25	10	15	111	5.7	14	21	10	18
24		14	8.4	8.4	11	5.6	17	12	95	13
July 1		62	8.4	8.4	10	7.1	8.4	9.0	16	9.7
8		17	7.8	10	9.7	5.2	17	9.7	17	25
15		62	7.8	42	5.5	8.4	85	21	13	27
22		13	35	15	7.1	7.8	24	15	24	10
29		12	6.5	56	7.1	16	22	17	14	9.7
Aug. 5		9.7	4.9	35	4.8	23	19	8.4	59	9.7
12		19	25	65	6.5	6.5	25	9.0	30	34
19		10	7.1	31	5.2	36	9.7	7.8	10	13
26		18	5.2	33	4.5	9.7	9.7	9.0	9.7	36
Sept. 2		8.4	4.1	16	9.7	12	7.8	7.8	8.4	46
9		7.8	4.7	17	50	9.0	14	7.8	13	64
16		7.8	5.9	6.3	6.0	7.1	90	9.7	16	12
23		6.5	6.5	6.0	12	7.1	19	7.8	7.1	9.0
30		8.4	5.3	5.8	11	5.2	28	73	48	14
Oct. 7	16	196	4.3	5.8	16	7.1	16	7.8	36	21
14	11	12	4.5	5.1	7.1	5.2	11	7.8	38	17
21	10	10	4.3	5.4	150	5.7	9.0	8.4	63	66
28	13	12	4.7	5.3	14	5.7	9.0	8.4	12	36
Nov. 4	9.0	30	12	5.8	30	6.0	12	9.7	10	16
11	10	17	7.8	5.0	48	6.5	10	14	12	12
18	9.7	47	19	5.6	17	8.4	9.0	16	23	39
25	12	25	8.4	6.4	32	7.1	22	7.8	12	14
Dec. 2	11	50	5.5	6.2	52	5.7	169	16	11	21
9	10	46	32	16	12	9.0	25	12	35	16
16	12	16	9.0	13	75	7.1	13	25	45	13
23	12	23	15	19	52	12	27	12	41	15
31	9.7	34	36	15	133	7.1	15	9.6	49	21
Maximum		238	107	124	150	78	189	178	276	196
Minimum		6.5	4.1	5.0	4.5	5.2	7.8	7.8	7.1	9.0



North Fork Buffalo Creek near Greensboro, N.C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1938	1939	1940	1941	1942	1943	1944	1945
Jan. 7	58	22	14	45	13	18	68	48
14	32	26	37	17	10	17	19	32
21	22	22	28	32	13	129	76	22
28	28	26	15	21	10	69	17	18
Feb. 4	21	68	21	16	15	45	14	16
11	17	110	100	15	21	109	38	21
18	16	65	30	32	71	25	116	116
25	25	26	50	16	17	18	36	74
Mar. 4	25	19	23	14	34	17	23	32
11	53	39	18	36	104	102	57	37
18	21	35	42	17	18	46	69	21
25	15	20	18	17	19	57	92	25
Apr. 1	14	30	23	46	30	23	141	28
8	21	27	30	43	13	16	26	17
15	22	16	23	17	18	23	154	16
22	15	25	19	14	11	117	40	19
29	11	18	18	28	10	21	31	34
May 6	9.0	54	13	12	9.0	17	21	17
13	8.4	16	11	14	8.4	19	17	14
20	12	12	16	10	30	19	19	32
27	14	11	25	9.0	109	27	18	18
June 3	13	16	80	17	18	15	17	14
10	12	18	19	12	114	41	15	12
17	8.4	12	10	80	30	42	18	11
24	32	9.7	23	9.7	19	49	14	9.7
July 1	21	12	11	14	10	23	9.7	10
8	14	8.4	39	24	30	48	8.4	6.5
15	7.1	11	21	79	23	228	22	31
22	14	40	10	92	9.7	41	19	16
29	64	37	8.4	12	10	16	12	9.7
Aug. 5	15	61	9.7	10	7.8	14	23	8.4
12	14	49	13	8.4	25	12	14	9.0
19	8.4	137	179	9.7	19	11	6.5	15
26	7.8	21	14	16	12	9.7	9.0	10
Sept. 2	12	50	17	8.4	9.0	24	7.1	8.4
9	5.8	11	31	22	21	25	5.2	11
16	61	9.0	16	8.4	9.0	12	8.4	36
23	65	70	8.4	7.1	7.1	15	9.7	376
30	72	11	9.0	7.8	14	10	81	16
Oct. 7	6.3	19	7.1	7.1	7.1	9.7	32	26
14	6.0	9.7	7.8	7.1	12	10	13	16
21	9.0	9.0	6.5	7.1	9.7	11	41	14
28	17	7.8	7.1	7.8	34	13	17	16
Nov. 4	17	129	16	7.1	11	9.7	13	13
11	14	12	8.4	7.8	9.7	17	12	13
18	9.7	10	147	7.8	9.0	10	12	16
25	8.4	18	14	7.8	16	10	14	26
Dec. 2	12	11	16	7.8	21	11	74	26
9	50	12	12	14	39	12	28	91
16	27	14	22	13	21	9.7	39	23
23	14	16	25	12	17	9.7	19	17
31	56	41	50	12	36	52	19	175
Maximum	72	194	179	92	114	228	154	376
Minimum	5.8	7.8	6.5	7.1	7.1	9.7	5.2	6.5

South Fork Buffalo Creek near Greensboro, N. C.

Location.- Water-stage recorder, lat. 36°03'30", long. 79°43'35", at McConnell road crossing, 3 miles east of Greensboro, Guilford County, and 6 miles upstream from North Buffalo Creek.

Drainage area.- 32.8 square miles.

Records available.- August 1928 to date.

Average discharge.- 17 years, 23.1 million gallons per day.

Extremes.- Maximum discharge, 2,430 million gallons per day, Sept. 18, 1945, (gage height, 9.54 feet); minimum discharge, 0.13 million gallons per day, Oct. 2, 1930.

Remarks.- Sewage from Greensboro enters just above station.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1928									91.7	10.1	5.26	5.59	
1929	6.59	67.8	56.5	33.9	21.7	22.4	22.4	5.41	4.11	54.0	35.3	31.5	29.9
1930	40.2	33.6	14.5	12.3	8.33	5.90	11.0	3.48	1.46	1.18	4.69	18.8	12.9
1931	16.2	9.04	17.1	48.1	16.7	5.72	22.2	28.6	3.31	1.81	2.28	11.8	15.3
1932	47.0	27.7	43.3	14.4	6.91	20.8	1.69	1.50	9.17	50.8	36.8	69.8	27.6
1933	33.5	39.8	20.7	18.3	8.79	2.84	3.52	7.11	2.77	2.60	3.46	4.44	12.1
1934	6.52	31.1	49.9	39.2	22.2	63.5	20.9	7.24	42.1	7.36	22.5	39.4	29.8
1935	39.7	27.3	58.4	54.2	38.7	8.27	7.62	2.99	18.5	3.12	9.69	11.2	23.3
1936	114	70.4	60.1	82.0	4.21	17.9	20.5	8.08	8.72	35.1	10.6	31.8	38.6
1937	116	36.0	22.5	35.3	13.3	4.78	9.17	16.3	14.5	24.5	17.3	12.6	26.9
1938	27.5	13.3	20.9	11.7	5.36	8.33	20.3	6.16	1.91	2.17	21.6	29.7	14.1
1939	26.9	76.2	49.1	17.6	12.4	5.23	22.6	51.4	13.0	7.11	7.11	12.7	24.8
1940	19.5	43.0	19.8	15.6	27.6	10.7	5.22	41.7	6.29	2.78	37.1	21.5	20.8
1941	20.4	12.6	22.0	22.7	4.35	8.08	30.3	3.19	2.62	1.76	2.41	4.75	11.3
1942	5.08	24.7	40.7	7.69	25.7	29.9	11.7	4.57	4.49	8.40	6.05	26.1	16.2
1943	53.8	41.7	51.1	30.6	10.5	37.9	84.0	10.7	6.15	3.28	5.92	14.6	29.2
1944	43.3	55.5	76.9	61.1	8.59	3.42	19.2	3.93	28.8	24.4	17.8	23.6	30.4
1945	24.2	60.1	23.8	14.9	27.2	3.75	6.23	4.86	102	11.5	13.4	63.5	29.3



South Fork Buffalo Creek near Greensboro, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1928									756	56	6.5	12	
1929	20	717	304	326	98	116	264	27	21	762	152	265	762
1930	333	194	47	58	44	45	130	27	7.1	5.1	23	113	333
1931	94	16	110	346	62	44	329	218	21	3.6	4.3	58	346
1932	401	114	419	90	25	209	12	12	129	659	150	236	659
1933	161	125	121	94	45	6.5	17	23	7.8	9.0	4.7	18	161
1934	21	331	317	160	133	428	226	63	256	34	177	570	570
1935	297	145	455	286	185	57	31	7.1	335	8.4	39	58	455
1936	601	480	391	598	6.5	266	152	41	63	253	56	105	601
1937	417	132	53	318	65	18	71	97	168	188	114	39	417
1938	138	51	159	68	17	41	194	25	2.5	3.7	285	229	285
1939	152	320	367	55	98	16	137	416	171	39	19	129	416
1940	194	262	107	83	292	72	12	315	53	4.4	358	75	358
1941	82	64	100	123	12	57	176	6.5	18	2.3	3.0	13	176
1942	10	209	223	28	311	238	68	20	36	63	30	109	311
1943	328	287	397	317	57	266	956	147	25	5.3	3.7	113	956
1944	276	342	260	659	35	8.4	381	16	736	293	127	99	736
1945	109	296	74	39	136	5.7	38	30	1760	61	41	354	1760

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1928									6.3	5.0	4.5	4.3	
1929	4.5	4.5	14	7.8	6.3	4.5	4.1	2.1	1.74	7.8	10	12	1.74
1930	12	9.7	8.4	6.1	2.8	1.68	.65	.52	.32	.39	.52	3.2	0.32
1931	6.2	5.1	7.1	8.4	4.2	1.68	1.94	3.0	1.42	1.23	1.23	3.1	1.23
1932	7.8	9.0	5.4	5.4	2.1	1.68	.78	.71	.84	2.3	9.0	8.4	.71
1933	13	14	6.3	6.5	3.0	1.74	.90	2.6	.97	1.29	1.93	2.4	.90
1934	3.0	2.6	4.3	7.8	2.6	2.6	3.9	2.4	1.68	3.5	7.8	7.8	1.68
1935	12	9.0	10	13	9.0	2.6	2.6	1.23	1.62	1.93	3.4	6.5	1.23
1936	9.0	7.8	10	6.1	2.6	2.6	3.4	3.0	2.1	4.6	6.5	6.5	2.1
1937	17	17	11	9.0	3.9	3.2	3.2	2.9	3.6	4.8	7.8	7.8	2.9
1938	10	8.4	7.1	4.5	3.1	2.9	3.2	2.6	1.36	1.29	1.55	6.5	1.29
1939	10	14	10	7.8	4.5	2.2	2.5	5.5	5.2	3.9	4.5	4.5	2.2
1940	6.5	11	9.7	7.1	5.0	4.3	3.0	3.1	2.8	2.3	3.2	7.1	2.3
1941	10	7.8	7.1	6.5	2.8	3.1	2.8	1.87	1.55	1.16	1.29	2.2	1.16
1942	3.2	4.3	7.8	4.7	3.1	4.7	4.0	2.1	1.87	1.81	4.1	6.5	1.81
1943	9.0	10	10	9.0	5.0	3.2	5.3	2.4	2.7	2.1	3.0	3.6	2.1
1944	7.1	6.3	13	12	3.5	1.94	1.94	2.0	1.42	5.4	5.1	9.7	1.42
1945	9.7	8.4	11	7.8	5.4	2.4	2.3	2.8	2.7	6.3	9.7	9.7	2.3



South Fork Buffalo Creek near Greensboro, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Jan. 7		7.8	15	29	39	23	10	67	240	213
14		7.8	25	16	130	70	9.0	48	72	28
21		5.8	105	17	12	19	4.1	14	151	181
28		5.7	26	7.8	12	30	3.7	41	16	44
Feb. 4		5.0	50	5.7	45	16	11	11	18	65
11		27	48	7.1	25	33	3.7	15	79	45
18		34	25	11	32	57	4.3	67	159	23
25		44	13	12	21	48	7.8	16	30	43
Mar. 4		220	11	10	9.7	19	171	13	16	30
11		92	20	12	125	16	47	33	23	20
18		26	10	8.4	7.8	14	6.5	110	114	26
25		59	19	21	17	43	22	32	38	21
Apr. 1		19	10	39	50	12	89	103	88	13
8		11	26	141	14	13	21	67	239	28
15		12	9.7	15	14	31	74	39	68	17
22		80	7.8	19	6.5	23	46	72	10	12
29		37	6.3	18	14	9.0	9.0	26	8.4	88
May 6		24	5.0	13	9.7	9.7	7.1	12	5.7	23
13		37	12	28	13	16	3.7	57	4.8	9.0
20		12	12	6.5	4.4	6.2	40	34	4.0	22
27		20	3.6	25	3.3	3.4	16	65	3.4	8.4
June 3		15	7.8	12	2.3	5.9	60	9.0	2.7	4.4
10		29	14	45	1.81	2.7	218	19	3.7	6.5
17		12	3.9	7.1	81	2.4	14	6.1	4.3	3.7
24		9.7	3.1	2.5	3.0	2.6	9.0	4.7	60	5.5
July 1		38	2.6	2.5	2.8	3.6	4.8	2.9	9.0	3.3
8		19	2.9	6.5	3.0	2.4	8.4	4.1	34	20
15		53	1.81	22	1.03	3.8	75	9.7	9.0	12
22		9.0	41	5.9	1.23	3.7	29	11	7.8	3.9
29		16	2.1	61	1.42	5.0	7.8	7.8	4.7	3.4
Aug. 5		4.7	1.55	39	1.42	6.3	11	3.6	43	4.7
12		7.1	11	50	3.3	2.8	17	3.7	17	14
19		3.1	1.87	18	.90	16	5.4	2.7	4.2	8.4
26		8.4	1.16	17	.97	3.2	3.7	3.0	3.2	25
Sept. 2		3.0	.78	5.3	4.3	4.8	3.4	1.62	3.5	23
9	154	3.6	2.0	7.1	23	4.3	8.4	68	9.0	43
16	7.8	6.5	1.67	2.6	2.4	3.2	108	5.1	13	5.5
23	207	2.8	1.68	2.0	5.7	2.5	41	3.0	3.2	4.0
30	20	4.0	.71	1.74	5.0	1.03	23	2.6	11	7.8
Oct. 7	19	205	.52	1.87	65	4.1	14	2.4	43	12
14	7.8	9.7	.90	1.94	3.0	1.74	6.5	2.4	44	11
21	7.1	8.4	.97	2.1	143	2.6	3.9	2.9	58	52
28	8.4	11	1.36	1.36	12	2.0	4.8	3.4	7.1	28
Nov. 4	5.3	33	3.2	1.62	25	2.3	11	4.8	7.8	12
11	5.3	24	3.0	1.62	47	3.9	12	9.0	9.7	9.7
18	5.5	48	9.7	2.3	14	4.1	9.7	14	18	36
25	5.4	23	3.7	3.0	28	3.2	17	5.5	7.1	9.7
Dec. 2	5.4	38	3.0	3.0	52	3.0	149	14	7.8	17
9	5.2	63	23	7.1	9.7	5.2	23	7.8	31	10
16	6.5	14	5.9	9.7	86	2.8	9.0	21	45	9.0
23	5.5	18	10	19	48	6.5	25	9.0	37	9.7
31	4.7	30	37	15	142	3.7	10	7.8	23	21
Maximum		220	105	141	143	70	218	110	240	213
Minimum		2.8	0.52	1.36	0.90	1.03	3.4	1.62	2.7	3.3

South Fork Buffalo Creek near Greensboro, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1938	1939	1940	1941	1942	1943	1944	1945
Jan. 7	37	17	9.0	36	5.3	14	81	43
14	42	21	24	12	4.4	13	16	31
21	13	21	43	24	5.3	105	82	17
28	24	27	7.8	14	4.7	52	10	12
Feb. 4	15	70	15	10	7.1	71	7.1	9.7
11	10	107	102	9.0	16	103	30	14
18	10	70	19	23	58	28	133	120
25	18	21	36	8.4	16	14	47	89
Mar. 4	16	169	17	7.8	26	12	21	29
11	48	39	14	32	106	102	56	36
18	17	32	37	13	14	45	66	15
25	9.7	15	12	12	16	59	104	17
Apr. 1	7.8	38	17	42	26	16	111	22
8	14	26	15	45	7.8	9.7	18	11
15	21	11	24	13	12	16	146	9.0
22	8.4	18	13	8.4	5.9	89	53	13
29	5.6	11	12	26	5.0	14	37	27
May 6	4.3	31	7.1	5.6	4.3	8.4	12	11
13	3.4	8.4	6.5	5.8	3.6	10	14	7.1
20	5.1	7.8	5.8	3.8	12	7.8	7.1	60
27	9.0	6.5	21	3.2	91	17	4.7	21
June 3	7.8	7.8	98	9.0	7.8	6.1	3.7	25
10	8.4	6.5	12	5.6	75	26	3.4	4.5
17	3.6	4.1	5.4	14	34	44	4.0	3.6
24	7.1	3.4	7.8	3.6	11	73	3.7	3.2
July 1	13	5.4	5.3	4.7	5.1	20	3.2	3.4
8	7.8	7.1	5.9	15	11	61	2.6	2.8
15	3.9	7.8	7.8	45	13	265	61	7.8
22	6.5	34	4.2	65	18	34	16	10
29	68	36	3.6	7.1	7.8	7.1	3.6	4.6
Aug. 5	9.7	20	3.8	4.7	3.7	5.2	6.5	4.0
12	6.5	45	4.1	2.9	7.1	3.2	3.3	5.2
19	3.9	112	163	3.3	6.3	3.0	2.7	7.8
26	4.3	21	9.0	4.1	2.8	2.9	3.6	3.6
Sept. 2	5.9	37	7.1	2.1	2.3	37	2.8	2.9
9	2.1	7.1	13	4.8	8.4	9.0	1.87	4.6
16	1.68	6.3	5.7	1.94	2.5	4.5	3.5	23
23	2.0	34	3.5	1.80	2.3	7.1	6.1	395
30	1.68	5.6	3.4	2.1	5.6	3.8	112	14
Oct. 7	1.87	13	2.6	2.2	4.5	2.9	52	19
14	1.68	5.0	2.5	1.74	5.0	2.8	6.5	9.7
21	2.4	4.8	2.6	1.42	4.0	3.4	33	7.8
28	3.0	4.6	2.8	1.62	2.3	3.9	14	11
Nov. 4	1.68	7.8	9.0	1.74	5.0	3.8	7.1	9.7
11	2.2	6.5	5.4	2.4	4.7	11	7.1	9.7
18	1.81	4.8	128	2.6	4.8	4.7	6.5	12
25	79	11	9.7	2.6	10	4.3	7.8	17
Dec. 2	10	5.9	10	2.3	12	4.5	67	16
9	39	5.9	8.4	5.7	36	6.3	25	76
16	17	7.8	13	5.6	16	5.0	36	16
23	7.8	8.4	23	3.7	15	4.1	12	15
31	57	28	43	4.8	37	4.2	14	151
Maximum	79	169	163	65	106	265	146	395
Minimum	1.68	3.4	2.5	1.42	2.3	2.8	1.87	2.8



# Cape Fear River at Fayetteville, N. C.

Location.— Water-stage recorder, lat. 35°02'50", long. 78°51'35", at highway bridge at Fayetteville, Cumberland County, just downstream from Cross Creek. Datum of gage is 20.23 feet above mean sea level (levels by Corps of Engineers, U. S. Army).

Drainage area.— 4,370 square miles.

Records available.— January 1889 to 1917, September 1928 to September 1940.

Average discharge.— 39 years, 3,110 million gallons per day.

Extremes.— Maximum discharge of record, 71,000 million gallons per day, Oct. 4, 1929 (gage height, 63.43 feet); minimum discharge, 47 million gallons per day, Oct. 6, 1930.

Maximum discharge known, 78,800 million gallons per day (actual measurement) September 21, 1945, (gage height, 68.77 feet, from recorder chart).

Remarks.— Lock 3, about 20 miles downstream, creates about 10 feet of backwater at Fayetteville except during floods, when the lock drowns out. Effect of this backwater, combined with diurnal fluctuation caused by power plants above station and by power plants on Rockfish Creek, which enters Cape Fear River between Fayetteville and lock 3, has made the development of a satisfactory stage-discharge relation for medium and low stages impossible. Fall between Fayetteville and lock 3 is used as a factor in the determination of discharge for stages above 20 feet. Discharge for stages below 20 feet was computed on basis of discharge records at lock 3 and Rockfish Creek near Hope Mills with adjustments for changes in channel storage.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1889	10271	9755	3359	3366	1318	4186	11240	9173	2222	2119	4839	1609	5288
1890	1286	3152	4554	2513	2332	1596	1744	5762	3366	2597	2028	2778	2809
1891	4277	6131	8850	4050	5258	3605	2474	9173	3030	1525	1111	2274	4313
1892	8010	2965	3656	5258	2216	3404	3308	943	859	391	937	1298	2771
1893	2526	9625	2765	1324	2959	2487	659	1751	5911	5517	1615	3818	3413
1894	4464	5142	3773	1331	1486	633	1195	4509	1499	6311	2390	2145	2906
1895	10401	6156	9044	10142	6040	1796	2448	2209	762	390	1124	1744	4355
1896	4128	9173	2132	2054	1770	2287	6848	704	891	2054	1596	2817	3037
1897	2403	8333	7817	4464	2093	1163	2054	995	408	312	814	1363	2685
1898	1292	1021	2067	2804	1421	724	1725	3553	2364	1053	1809	2093	1827
1899	3308	14987	10530	5420	2313	1376	1434	1195	698	1376	1983	1802	3868
1900	2532	6363	5601	6977	1841	1725	904	474	628	349	788	1783	2497
1901	2145	1822	3146	6977	7881	3275	6124	10594	5246	1583	975	2791	4380
1902	3960	8786	7106	3430	1318	872	543	541	638	982	937	3714	2736
1903	3640	8398	9884	8204	1563	2048	1466	963	762	749	730	969	3282
1904	1363	5200	3882	1305	1240	1447	1899	3837	6092	1027	3521	2829	2804
1905	3947	9884	4083	4748	5930	2151	4225	6299	1906	634	743	4851	4117
1906	7623	4658	4761	3656	1124	2261	3514	7752	3592	1357	911	1576	3565
1907	1182	3392	3824	3714	2183	4277	1557	1357	1712	513	2280	6047	2669
1908	8075	5859	7429	3049	1492	1447	1621	11628	5090	1363	2332	4193	4465
1909	2500	4044	2410	2022	4703	4154	2041	6460	1176	659	585	982	2645
1910	1906	3346	2862	2410	1919	4457	1699	1647	1609	2067	866	1744	2211

Cape Fear River at Fayetteville, N. C.

Mean Discharge in Million Gallons per day (continued)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1911	3269	2778	3023	2494	1092	717	632	788	1848	1021	2138	5013	2068
1912	3527	6137	11176	5071	4354	2565	1402	520	724	508	1027	904	3160
1913	3908	2855	6027	3650	1266	1660	1344	1944	1990	1537	2345	2752	2607
1914	3902	6273	4522	3146	975	795	950	685	646	610	1202	6169	2490
1915	9302	5026	2681	4541	2784	4916	1034	1828	1557	1454	995	1563	3140
1916	2190	5846	2345	2972	1983	4496	5078	2274	1098	730	623	1001	2553
1917	2364	4115	8398	4987	2087	2532	5446						
1928									20284	2532	1034	1021	
1929	1531	5827	13631	4180	3527	3469	3631	2248	1331	11693	5362	4684	5103
1930	4289	4716	2345	2009	1176	1473	930	498	225	178	564	1944	1680
1931	2584	1214	1951	4981	4684	749	1182	6783	665	233	229	2216	2300
1932	5820	3430	5284	2100	1621	2849	519	467	271	2248	3165	7429	2950
1933	4716	5284	2532	2920	1059	477	445	1292	937	169	229	291	1672
1934	463	1014	3320	4412	1221	3876	2203	1421	3456	851	1276	4538	2339
1935	4413	3855	5704	6313	2595	658	977	316	2774	355	1652	1831	2608
1936	11970	9735	7584	11848	941	2521	1585	2640	948	4023	1704	6563	5158
1937	12326	6848	4016	5304	1853	979	938	3091	2156	1165	1162	1198	3403
1938	2714	1320	1937	2919	1045	2320	5100	1236	1262	634	1640	2852	2089
1939	3040	10904	7048	3061	2324	1006	2394	7100	1286	545	627	994	3319
1940	1968	5449	3498	3299	1189	1481	553	2570	461				

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1889	22400	27100	8910	8270	3970	24200	29100	28200	4920	11700	17100	4920	29100
1890	2120	8270	10400	5170	5220	3520	8270	11400	15600	10100	2760	8400	15600
1891	9040	23400	25100	8270	29200	16600	5480	27100	12500	2760	3160	4480	29200
1892	33700	11400	12500	19000	5120	8270	6780	1630	2080	646	2290	5120	33700
1893	10700	26400	8790	2260	16700	10800	1470	12300	23300	26100	4380	12400	26400
1894	13100	13900	14000	2530	3340	2010	5010	19100	6520	32000	8270	7360	32000
1895	43400	13900	25100	31800	28700	4060	8910	8400	1280	510	2640	7360	43400
1896	12400	32200	3520	9950	6780	8270	33700	1070	2870	16300	7680	5630	33700
1897	11000	21000	22000	14100	6780	2530	11900	1870	1160	556	2960	3080	22000
1898	4920	1600	8590	9240	3970	1940	6060	14800	7560	3080	4920	7110	14800
1899	10700	36500	26100	20100	6720	3570	4330	3750	1500	6520	9170	4920	36500
1900	9110	20500	18500	28000	7110	6780	3970	1140	3250	710	4200	5940	28000
1901	5630	3610	20500	31800	44000	10300	25600	28900	27600	3250	1630	19900	44000
1902	20100	24400	25800	12400	1940	2290	1100	840	2530	2290	3080	9300	25800
1903	11400	18300	34900	23100	5270	4920	6650	2080	2680	2490	1370	2840	34900
1904	5430	18800	11700	2600	2370	7360	4920	12500	34300	3520	13800	6520	34300
1905	1500	30500	9750	12600	13100	7690	19800	25500	6650	866	1140	18800	30500



## Maximum Discharge in Million Gallons per day (continued)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1906	22800	11000	15500	20100	2290	7430	13600	24700	22900	3610	1220	5170	24700
1907	1940	10300	9040	12400	6780	13900	4920	3610	10500	1900	12600	21600	21600
1908	20800	14900	25800	8720	2450	3080	5120	55300	21400	6620	8270	22500	55300
1909	6910	10300	4330	5220	19900	17800	7110	31800	2490	1280	917	3750	31800
1910	6980	6720	9750	13100	8910	22800	5170	4110	4570	9110	1220	5430	22800
1911	15600	11000	7360	6980	2530	1470	1100	2450	11700	4380	8460	20200	20200
1912	10600	14700	34300	18000	12900	9040	2120	814	2120	917	4630	1870	34300
1913	20000	6060	21500	13100	5130	5220	3080	8790	10800	6230	14000	8400	21500
1914	15400	22600	10900	7110	1690	1720	1830	2220	1160	943	5320	25100	25100
1915	21800	18000	6910	16200	8660	24400	3000	7560	4920	4680	2800	5320	24400
1916	4290	28000	5940	12400	6230	16600	19300	6290	3080	1690	1070	1870	28000
1917	9040	11000	24700	17600	6350	7560	16600						
1928									68500	6270	1470	1370	
1929	3510	28700	38900	14500	13300	8080	11200	7430	3660	69100	16700	15400	69100
1930	10700	15600	5880	5340	3240	3970	6270	1110	386	543	917	7950	15600
1931	5340	1580	4070	18900	19500	1370	3010	22400	1730	307	329	6200	22400
1932	28700	6780	27800	4650	3280	14600	2120	2160	950	17000	11600	19100	28700
1933	8140	8790	4820	7360	2420	2070	1110	4620	3060	253	363	432	8790
1934	620	6980	12900	17400	5800	16600	6720	2930	13600	2700	17400	24900	24900
1935	15700	12400	17500	15500	11000	1470	2920	620	18000	711	6460	7750	18000
1936	30700	32700	30000	46700	1810	11000	10100	10900	3070	13200	4790	20900	46700
1937	24800	17400	7360	19400	6250	1780	2770	10600	9500	2410	2690	2550	24800
1938	12700	2130	5830	17400	4990	5680	27400	3100	4320	1030	9370	15100	27400
1939	8200	28000	24000	9560	13200	2270	10900	26200	6720	1230	1210	3860	28000
1940	7040	19500	13500	6650	2950	8590	1470	18000	930				

## Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1889	2290	2840	1340	1280	691	1280	1870	1600	1430	736	1800	1020	691
1890	995	1160	2010	1660	866	711	355	2370	995	866	1050	1160	355
1891	1940	2290	3170	1720	1190	1020	1190	1300	1160	891	788	1800	788
1892	1940	1940	1870	2220	1530	1250	995	284	300	284	284	452	284
1893	736	1800	1340	917	736	866	336	355	891	891	1140	1530	336
1894	1630	2290	1600	866	788	317	433	891	384	1370	1160	1020	317
1895	1560	2600	2840	2450	1980	995	1050	762	375	268	691	646	268
1896	995	1760	1370	866	533	672	840	394	284	533	623	1220	284
1897	995	1430	2010	1100	995	472	491	556	203	191	394	736	191
1898	814	556	788	969	711	336	317	578	556	394	866	1160	317
1899	1140	3080	2560	1800	1050	623	578	413	394	394	814	995	394
1900	969	1100	1940	1470	891	623	300	236	203	252	236	533	203
1901	995	969	736	1600	969	1100	943	891	995	866	866	891	736
1902	1340	1870	2010	1300	891	491	317	355	236	433	452	1370	236
1903	1470	1800	2010	2800	917	917	394	452	375	284	533	510	284
1904	711	1430	1600	840	578	491	510	969	943	510	840	1280	491
1905	1530	1530	2180	1300	1600	840	672	788	711	472	510	840	472

Minimum Discharge in Million Gallons per day (continued)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1906	1940	2290	2040	1100	646	917	969	1280	969	736	736	691	646
1907	891	1050	1280	1340	917	1100	578	578	491	268	336	1300	268
1908	1660	2290	1980	1560	866	762	736	917	891	840	1020	1140	736
1909	1370	1280	1560	1340	995	1220	646	646	601	375	375	317	317
1910	533	1470	1100	623	736	578	623	691	601	533	533	623	533
1911	1140	1050	1340	1300	510	413	317	394	375	433	646	762	317
1912	1940	1690	3570	2180	1280	1070	510	336	300	336	317	533	300
1913	672	1340	1720	1160	578	646	413	491	394	452	840	866	394
1914	1500	2260	2410	1600	510	336	317	268	413	355	394	646	268
1915	2150	1940	1280	1500	1050	788	578	452	433	691	623	672	433
1916	1400	1370	1140	866	578	1280	917	736	491	472	433	623	433
1917	866	1530	2330	1370	762	788	1500						
1928									2260	950	698	672	
1929	788	1010	3940	2160	1400	1140	1140	788	698	1470	1810	2510	698
1930	1650	2040	1580	1050	581	477	278	147	121	71	296	504	71
1931	1270	917	1010	1650	1110	234	284	672	284	162	187	255	162
1932	1540	1850	1430	1110	820	646	171	140	123	140	788	1010	123
1933	2290	2830	1540	1180	491	164	142	284	164	119	155	190	119
1934	273	408	1300	917	242	517	517	568	504	284	375	950	242
1935	1770	1340	2240	2000	1050	229	181	129	297	207	452	646	129
1936	1100	1560	1940	1680	452	258	452	452	388	1280	969	904	258
1937	3880	2970	2070	1680	775	258	297	517	258	484	620	736	258
1938	1140	911	969	911	407	911	562	452	510	333	484	1090	333
1939	1650	4230	1980	1400	646	433	388	1520	452	211	373	355	211
1940	943	1220	1490	1160	422	293	162	130	131				



Cape Fear River at Fayetteville, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900
Jan. 7	9440	1870	2240	2370	4200	2020	1780	3590	1430	1070	1460	1230
14	7800	1290	5000	2750	1250	10200	25500	1110	1090	877	4630	3550
21	10600	1050	4190	15400	976	3930	8200	5430	2210	913	5880	3380
28	13200	1040	6010	13300	1330	1910	6010	7130	5230	2030	1870	2550
Feb. 4	7440	1190	4280	3140	6150	4020	12200	3790	4660	1530	3660	1290
11	3160	2880	4950	2610	2810	3840	5580	24200	12100	906	25400	2230
18	6870	3220	3430	2450	22100	7160	2990	7160	5680	751	9660	13700
25	22200	2770	11200	2220	9820	4800	6570	2720	8030	1300	18100	5700
Mar. 4	6080	7990	4760	7220	4700	9350	4970	2430	5660	926	11100	10300
11	1530	3300	5540	3200	3350	3960	8330	1540	7070	3900	11400	6150
18	4670	3140	15000	2350	1910	2020	10500	2540	17300	1770	12500	5130
25	3800	4980	6930	2500	1830	2160	14500	2390	6220	1290	10500	3150
Apr. 1	2950	4050	10100	3630	1760	1930	4100	1730	2260	2980	5900	3570
8	2120	2190	6520	4020	1370	1300	3180	4620	6610	4830	6770	2330
15	1730	2200	3970	9350	1270	1670	18900	1390	8130	2020	9670	3640
22	5050	3470	3290	3940	1570	1230	11600	1120	2520	1230	2790	12400
29	4390	2340	2460	4580	1060	1150	5960	1220	1390	2240	2620	10900
May 6	2970	2180	1530	1920	6080	828	17900	2220	2940	1490	1730	2130
13	1550	3250	1590	1870	4110	1860	5110	1020	1370	1460	3350	1330
20	912	2130	3010	2090	1450	1080	2930	614	3380	1140	3440	2050
27	755	1430	3490	3230	884	2270	2710	3110	1120	1910	1440	2360
June 3	6520	2250	18500	2010	1530	1300	2040	1380	1500	1030	1450	949
10	3560	1320	4240	7110	4040	651	1050	4130	1560	455	1260	744
17	1640	2340	3240	2310	1710	450	2330	1980	950	484	2310	787
24	2120	1650	2080	2620	2940	548	1900	1330	859	1350	882	2320
July 1	8060	952	1450	5140	1370	518	2300	2280	917	563	736	3400
8	20300	1170	2220	5050	1200	1400	3340	1740	712	1850	1210	873
15	2810	600	2490	3450	556	627	1290	23500	1570	2570	1500	607
22	3070	608	1660	3610	536	601	1420	3010	3320	1340	791	492
29	12900	3030	3660	1650	388	2320	3920	1660	2920	1530	2010	1460
Aug. 5	21500	7090	8500	1300	1110	3400	1180	880	955	1500	2570	825
12	13400	6780	4720	1110	1440	10900	968	595	1330	845	1570	324
19	3480	4220	1740	536	402	2670	4050	818	723	3250	769	488
26	1840	7280	14900	625	1190	1630	2860	651	1230	8810	756	597
Sept. 2	8790	3910	14300	1310	7060	1940	1480	528	791	2480	526	594
9	2390	1580	4510	708	7410	978	934	1220	576	4230	450	457
16	1880	3850	3080	556	10000	611	1030	587	302	1670	944	271
23	1790	5660	1420	886	3280	1690	567	656	314	715	648	1290
30	2120	1780	1240	1130	1240	2800	402	1250	314	2620	770	329
Oct. 7	1300	1850	1230	534	1720	3240	318	6600	255	745	1120	297
14	1050	1080	1800	380	1670	17100	458	738	227	800	3310	359
21	792	2620	2120	344	4690	3990	410	690	222	689	805	490
28	2620	4820	1220	321	14700	1700	369	791	472	1730	556	287
Nov. 4	4820	2330	913	340	2680	4260	1010	663	1300	2280	3710	309
11	2020	2430	906	705	1520	3690	1030	3910	1010	1160	1780	1900
18	2121	2430	1060	1320	1600	1760	1550	1130	532	1480	1050	517
25	9010	1770	1110	1360	1260	1540	760	855	450	2670	895	336
Dec. 2	7560	1300	2390	582	2170	1230	887	1600	836	1370	1940	607
9	2010	1310	2230	522	4410	1260	722	3990	1200	4160	1530	2630
16	1560	1530	2130	601	3140	3920	2510	2960	840	1430	2060	913
23	1170	4370	2100	2670	6630	1720	1950	2940	1090	1430	1240	2020
31	1070	4060	2090	1580	1800	1990	2030	1360	2150	1530	2260	1870
Maximum	22200	7990	18500	15400	22100	17100	25500	24200	17300	8810	25400	13700
Minimum	755	600	906	321	388	450	318	528	222	455	450	271



Cape Fear River at Fayetteville, N. C.

Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Jan. 7	2510	8650	6740	836	2110	13600	1610	9950	2600	840	7940	3550
14	2220	1790	3430	853	8470	4760	1170	15700	1760	1110	2490	3880
21	2870	1380	1970	847	4080	2760	1010	6970	4150	913	1760	3320
28	1370	4340	3030	2790	2160	6760	956	2080	1850	3260	1670	2740
Feb. 4	1420	11200	2100	1600	1580	8470	1240	4090	1530	3970	1530	5670
11	2660	7750	11100	4350	2620	4970	3080	2850	2770	1700	3680	2130
18	2190	2230	12500	2030	13000	694	2240	9040	4410	4270	4100	6050
25	1110	6480	7830	10700	18800	2940	3580	7300	5520	4270	1800	8710
Mar. 4	984	22100	7980	5000	6780	2360	7440	3240	4420	5480	1500	6640
11	825	7550	3760	6040	3070	3640	3010	2430	2660	3130	3630	10800
18	1090	3770	5390	3130	7150	3030	6630	5660	2110	3010	3840	17200
25	941	3710	14100	1970	3030	7410	2610	11300	1610	1480	3010	11900
Apr. 1	11100	4160	17000	4210	2630	8570	1400	12600	2890	1230	2340	8850
8	17500	2820	8500	1370	3600	6790	3440	4950	2000	1090	1900	5350
15	3600	6380	7060	1300	3900	2290	3500	1900	1890	966	3730	2780
22	4350	2760	6620	1070	7260	2230	1620	3360	2720	6010	2900	2480
29	3620	1610	8530	1190	2890	1330	6880	2070	1530	1790	1750	8970
May 6	1220	1550	3680	1310	3070	1240	3460	1750	10800	1310	1350	3060
13	1890	1160	1590	1390	9560	1450	3200	1490	2680	4140	947	6810
20	1610	1520	1200	1540	6650	844	1640	967	1370	1330	1630	6700
27	24100	1220	1020	1180	1900	687	1050	2010	5070	1380	736	2120
June 3	7780	936	1180	808	8260	1350	3900	963	1700	892	614	1610
10	1660	591	2360	1060	2140	1200	4110	1800	8660	1340	521	2850
17	2280	559	1920	1920	1990	1690	6200	1480	2930	10800	822	3920
24	5750	1390	1720	1210	1490	4060	1670	1340	3390	4790	905	2310
July 1	3270	1050	2380	2290	958	2470	3590	1350	2600	2080	691	1560
8	1780	559	2340	1300	2030	1510	2220	1590	3800	1050	525	1460
15	4310	667	1780	1990	6850	2280	1340	1400	1430	2150	484	1770
22	17200	508	1470	894	5850	1950	1620	1680	1670	2650	937	1470
29	3120	377	565	2990	3440	8500	878	1370	1170	1100	609	1100
Aug. 5	1120	528	634	2210	1490	6570	1060	2800	12200	990	479	525
12	17100	516	1060	6610	10100	3090	943	2820	10800	1750	1260	519
19	16200	626	1400	4820	12200	5180	1330	1430	4290	2390	797	438
26	8670	585	934	1110	2380	8100	2430	11800	1390	1720	595	534
Sept. 2	5320	367	543	3270	2510	18200	684	38800	1130	1640	3460	567
9	2200	277	520	3800	4330	5280	4360	9990	884	2980	2660	581
16	1120	825	880	7820	1420	1450	1110	4070	868	1550	826	444
23	15000	307	1210	12600	1150	1640	576	1400	1610	840	567	417
30	2990	1240	471	1390	859	1380	1140	1210	1250	706	891	1530
Oct. 7	2610	1160	337	825	526	1300	1010	1200	587	618	563	602
14	1380	1400	439	666	660	999	358	1010	549	2650	517	439
21	1660	1060	1050	661	669	1180	391	913	718	2200	1560	493
28	973	496	1100	1910	607	2090	353	1290	774	3260	1360	525
Nov. 4	902	554	731	982	913	960	419	3260	651	1070	1010	433
11	902	656	840	4520	780	836	522	1360	641	1020	3080	1820
18	880	538	630	7040	594	946	652	4090	589	805	2710	1100
25	981	1140	866	2050	725	1020	3960	1840	526	762	1670	752
Dec. 2	1150	2850	594	1360	769	781	5000	1460	565	677	1850	655
9	969	6220	562	4090	2160	762	1480	1410	547	1820	1340	917
16	1680	3130	718	2410	2700	1330	8910	2150	1410	1370	1020	801
23	2550	2990	1280	2840	7160	2720	7160	2570	1220	1010	7270	614
31	6030	2310	1370	2460	8060	1710	7550	10500	888	2920	10400	1300
Maximum	24100	22100	17000	12600	18800	18200	8910	38800	12200	10800	10400	17200
Minimum	825	277	337	661	526	687	353	913	526	618	479	417



Cape Fear River at Fayetteville, N. C.

Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1913	1914	1915	1916	1917	1928	1929	1930	1931	1932	1933	1934
Jan. 7	2100	9410	4860	2160	1580		950	2500	2420	3330	4250	468
14	1510	2990	12100	2670	1910		2000	1870	3190	16300	5160	540
21	959	1650	14200	2550	2180		1920	7950	3210	3100	5170	424
28	6120	2440	8070	1600	2550		1230	5250	2050	1710	4640	452
Feb. 4	8830	3040	8020	7700	5600		1440	4830	1200	3470	3340	546
11	2160	4080	6090	11400	2120		2180	8530	1010	3820	4360	717
18	3000	3150	2730	2400	1750		5350	3780	1290	3720	7620	612
25	3090	13500	2880	1640	5890		7880	2560	1450	3240	6040	665
Mar. 4	5190	6840	3720	3260	7850		24400	2070	1150	1890	2970	3220
11	2670	4660	4520	3850	15800		21200	3420	2200	1030	2210	3750
18	10600	4360	2250	1960	3340		7950	2180	1420	3380	2410	1790
25	6510	3780	2460	1480	5420		8330	2100	2090	2320	3520	2500
Apr. 1	4340	2860	1550	1330	8530		6980	1760	2740	3290	1780	6520
8	3440	3490	10300	3470	6490		3950	2670	9630	2760	2080	3510
15	5160	2840	4640	6250	9810		2250	2360	4590	2530	3160	8400
22	3650	4180	2180	1530	2610		6910	1850	2620	1620	4790	3950
29	1560	2340	1860	1170	1820		2750	1360	3750	1430	2090	1510
May 6	1270	1360	1390	967	2110		3570	904	2470	1500	1220	795
13	975	1370	3040	735	4090		4050	827	5250	1170	1770	446
20	860	885	2150	3350	1490		1690	2210	1850	1300	801	2530
27	1330	619	2600	2920	1220		6010	1030	10300	2140	685	1030
June 3	2020	610	9510	1880	960		2260	736	1650	1870	1080	2240
10	1220	566	10100	6750	1340		3000	1280	963	795	485	9560
17	1550	820	1710	3650	5570		3900	1680	583	7560	352	3350
24	999	956	2270	5600	2340		2490	2490	736	2150	233	1490
July 1	3140	876	909	2560	1630		5050	559	478	1440	357	814
8	1520	1120	894	2980	2120		2460	495	580	911	312	2970
15	866	1280	915	1180	2810		4220	386	1420	452	386	3300
22	910	1060	993	1820	8000		5810	536	775	304	614	1250
29	1720	495	1460	12900	9720		2580	594	1960	224	490	1340
Aug. 5	3260	447	1750	7050	2350		1930	672	3600	384	659	1810
12	3010	603	2100	2550	1520		3250	473	4550	1100	1790	1730
19	1470	589	1130	1330	1270		2020	539	7110	346	1120	1010
26	840	425	1010	1070	1030		1740	479	12900	222	1490	1260
Sept. 2	843	1300	3680	2250			1960	215	2660	160	1160	1610
9	4410	661	3120	1110		29700	2310	183	1120	516	1790	2960
16	913	510	1030	1390		7040	1010	260	534	183	1250	4070
23	1520	749	610	829		40100	911	208	350	178	399	6210
30	1380	671	530	559		8850	866	252	394	243	203	1270
Oct. 7	1270	497	904	626		4470	42200	105	249	244	178	1450
14	1210	484	2750	589		3620	4330	111	210	570	164	1160
21	866	799	1230	750		1440	1720	254	246	7360	167	611
28	3150	629	1160	1000		1250	2640	147	225	1400	175	401
Nov. 4	1690	542	844	771		1250	2550	411	222	1400	180	437
11	4100	503	701	479		1150	7820	596	224	5030	221	685
18	3180	1860	775	636		924	4340	534	221	2000	238	631
25	1310	1890	1630	637		904	3530	736	233	2550	234	517
Dec. 2	984	870	995	605		937	6590	481	267	3610	229	9560
9	3230	4140	862	663		1010	8660	1380	3070	1360	259	6380
16	1460	3450	970	1070		827	3400	1320	2000	9880	300	1480
23	1130	2930	2660	1080		1230	3110	1300	1800	6150	307	3440
31	5340	14500	1880	1260		1030	3930	3880	2490	13100	318	2230
Maximum	10600	14500	14200	12900			42200	8530	12900	16300	7620	9560
Minimum	840	425	530	479			866	105	210	160	164	401



Cape Fear River at Fayetteville, N. C.

Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1935	1936	1937	1938	1939	1940						
Jan. 7	7240	16900	16200	1670	2750	1200						
14	4410	16300	8400	5860	1900	1540						
21	2240	10900	10600	1850	3730	3990						
28	4550	8010	10400	1780	3180	1470						
Feb. 4	2180	2610	16600	1580	5170	1270						
11	1620	11700	6260	1250	12000	9500						
18	6070	19300	4570	1120	15400	4270						
25	3520	6120	7300	1100	5660	6520						
Mar. 4	5920	2520	4790	1630	19300	2580						
11	2880	2340	4530	1740	8200	2700						
18	8270	8270	4170	3260	5010	6520						
25	2860	13400	3500	1850	3140	2600						
Apr. 1	9820	9170	2810	1110	4300	2800						
8	8590	23400	5010	1870	3570	2040						
15	7690	21200	4830	7360	2420	4730						
22	3800	2930	2770	1560	3650	3820						
29	5390	2110	8660	1470	1850	2710						
May 6	1750	1510	4120	698	6010	1370						
13	1250	1140	1720	485	1910	1050						
20	2530	853	2090	736	1290	820						
27	5280	6090	1020	1180	1030	1390						
June 3	1400	452	840	2100	801	3240						
10	1040	637	1340	2120	1490	1400						
17	579	1610	937	1450	1220	1010						
24	518	4740	1200	3480	911	1150						
July 1	293	3790	411	2810	532	470						
8	258	1740	904	1940	1450	665						
15	1010	801	872	1180	1490	743						
22	1870	1160	840	1270	2570	646						
29	917	1470	1070	16400	4100	287						
Aug. 5	536	5850	1520	2890	2530	218						
12	295	4280	1080	2110	2750	261						
19	190	1230	2670	698	6070	9240						
26	318	646	2640	517	9820	1220						
Sept. 2	412	1700	7750	879	12700	756						
9	6130	512	4770	1050	1760	652						
16	3730	1780	1910	623	859	615						
23	1050	795	614	2440	646	293						
30	859	685	383	1090	698	209						
Oct. 7	494	3670	1090	853	995							
14	338	6650	1310	637	562							
21	322	5030	833	464	398							
28	269	1860	1510	646	330							
Nov. 4	510	1230	1210	541	423							
11	1820	1350	717	743	581							
18	3240	3420	1910	578	474							
25	1140	1140	1070	3820	879							
Dec. 2	840	1010	988	1990	646							
9	833	3060	1060	2560	545							
16	3240	13100	885	2380	515							
23	2420	9430	879	1220	594							
31	1140	2820	1880	5280	2240							
Maximum	9820	23400	16600	16400	19300							
Minimum	190	452	383	464	330							

Cape Fear River at Lillington, N. C.

Location.- Water-stage recorder, lat. 35°24'25", long. 78°48'45", at highway bridge just downstream from Norfolk Southern Railway bridge at Lillington, Harnett County, and 1 mile downstream from Neill Creek. Datum of gage is 105.71 feet above mean sea level (levels by Corps of Engineers, U. S. Army).

Drainage area.- 3,440 square miles.

Records available.- December 1923 to date.

Average discharge.- 22 years, 2,149 million gallons per day.

Extremes.- Maximum discharge, 124,000 million gallons per day, Sept. 19, 1945 (gage height, 33.19 feet); minimum discharge, 19 (regulated) million gallons per day, Oct. 8, 1926 (gage height, 0.01 feet).

Remarks.- Large diurnal fluctuation and considerable regulation for short periods at low flow caused by power plants above stations.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1923												891	
1924	2727	3806	2792	3078	2301	1149	3114	1646	2912	2902	891	1576	2404
1925	9467	2780	2120	1047	1101	315	373	317	203	91.7	311	459	1550
1926	1816	5205	3205	2704	323	456	1083	538	167	55.4	176	1402	1405
1927	842	2804	4045	1244	463	735	2253	1617	682	2437	773	4795	1895
1928	853	2465	1767	5252	2855	1825	1238	3719	14841	1556	598	575	3105
1929	899	4882	10734	2960	2697	2562	2945	1638	682	8814	3667	3047	3800
1930	2966	3475	1561	1355	681	1065	687	262	107	65.2	256	1297	1134
1931	1669	753	1386	3529	3386	525	927	4751	366	126	145	1482	1601
1932	4652	2649	4368	1583	945	1990	285	357	233	2056	2514	6040	2318
1933	3411	3632	1797	2192	729	344	215	793	519	85.3	91.1	154	1147
1934	296	827	2849	3965	1170	3360	1676	1058	3329	685	1313	3643	2013
1935	3403	2833	4345	4879	1952	523	766	196	1954	207	1163	1234	1946
1936	9651	7526	6090	8870	567	2027	1389	1735	505	2422	688	4123	3787
1937	9528	4313	2560	3850	1330	643	726	2508	1710	995	799	813	2474
1938	2229	1036	1691	2048	867	2005	4563	895	503	224	1132	2026	1609
1939	2204	9041	5435	2207	1901	779	1621	5626	690	325	415	696	2542
1940	1387	4384	2585	2495	1029	1113	465	2466	408	108	2125	1169	1631
1941	1774	1267	2719	3674	452	845	2306	295	240	76.2	69.1	402	1176
1942	368	2145	3766	994	1896	1542	467	1318	1333	840	1205	2715	1547
1943	5103	3306	4253	3223	880	1380	4302	423	550	136	251	605	2032
1944	3478	5096	7268	5152	1533	328	2570	1166	1040	4136	1315	2098	2930
1945	2306	5322	2484	1371	992	289	1994	1229	15846	1274	759	5373	3239



Cape Fear River at Lillington, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1923												2410	
1924	16700	17900	6720	11500	6100	3900	14800	12900	31500	31800	4020	6250	31800
1925	28200	8910	13300	2230	2680	620	2140	1180	975	226	788	2230	28200
1926	14400	16700	9430	11500	749	2410	9630	2500	478	136	717	10500	16700
1927	2410	11800	18900	2180	1430	1820	11100	10700	1730	12300	3510	24100	24100
1928	2350	8790	9750	29400	9820	8850	7040	23500	53800	4910	827	808	53800
1929	2510	30400	41600	14000	11400	9040	11200	8590	2680	62100	14100	12700	62100
1930	10000	15500	4300	4530	16600	3670	5310	717	202	162	608	-----	15500
1931	3930	1090	3670	15500	14100	1170	2860	14700	814	236	374	5250	15500
1932	28400	5750	30800	3880	2570	11400	1200	2650	1160	17600	8980	17200	30800
1933	8530	7880	3990	5540	1520	2030	522	1650	-----	208	248	355	8530
1934	517	7300	12100	22300	5560	14300	7620	2640	14000	2120	17700	24100	24100
1935	14100	10500	15000	15200	8980	1230	2450	420	19400	574	7170	9040	19400
1936	33500	30400	29800	40600	1020	10300	12700	7950	2310	11000	1940	15400	40600
1937	20900	12000	5120	16500	4390	1210	2250	9500	10800	2950	2560	1920	20900
1938	12600	2090	7750	11500	6290	5590	24700	2860	1650	462	8850	12300	24700
1939	8980	25200	20200	6060	15800	2360	9040	27400	3540	730	917	3220	27400
1940	6650	18200	10400	5810	5530	7490	1700	17200	879	239	18100	3570	18200
1941	4260	4860	11900	15200	1080	4620	7560	1230	1070	379	178	1270	15200
1942	698	16700	14500	4150	12400	5170	775	7110	10300	2210	8400	10300	16700
1943	23400	17900	18500	22100	2530	6430	22200	2210	2940	310	904	3010	23400
1944	19400	17900	24000	24500	9950	795	22400	7170	12900	36400	8400	8400	36400
1945	6980	15600	7880	5960	3130	717	9040	8080	120000	5170	1550	20700	120000

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	June	August	September	October	November	December	Minimum of Year
1923												242	
1924	652	620	1260	1090	452	478	504	155	46	452	317	226	46
1925	1690	1180	530	620	317	132	72	59	37	46	91	79	37
1926	242	559	1340	1010	91	76	89	103	56	19	35	87	19
1927	181	236	457	432	83	77	301	203	123	74	285	559	74
1928	479	685	462	430	775	433	213	142	1510	640	349	336	142
1929	508	455	2130	1160	782	704	762	421	346	691	866	1430	346
1930	1010	1270	1010	634	335	307	162	50	42	31	59	110	31
1931	698	477	539	---	820	162	116	782	133	47	54	78	47
1932	937	1380	924	659	389	221	41	31	33	47	607	610	31
1933	1640	1650	1090	840	162	50	47	168	48	48	44	52	44
1934	58	140	814	736	135	350	384	274	335	163	247	672	58
1935	1230	827	1440	1440	665	138	50	44	142	58	278	351	44
1936	549	1100	917	1150	90	160	302	127	145	579	417	375	90
1937	2110	1760	1320	1110	534	138	191	323	162	308	340	459	138
1938	717	698	717	525	212	556	357	205	123	52	167	549	52
1939	969	2380	1190	937	514	149	193	652	199	125	168	215	125
1940	472	724	1080	866	229	212	130	94	104	40	156	336	40
1941	788	567	486	756	116	132	199	57	47	24	33	38	24
1942	245	235	982	337	171	207	297	123	84	258	275	833	84
1943	969	872	885	969	248	225	665	76	127	52	83	115	52
1944	672	523	1230	1430	388	185	167	120	68	273	298	749	68
1945	736	652	1070	519	278	185	83	205	190	465	452	969	83



Cape Fear River at Lillington, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Jan. 7		1510	9240	348	1570	937	594	1540	1710	2530	2740	355	6140
14		898	11700	600	505	833	1380	659	2180	14000	4310	392	3350
21		5960	14000	4640	975	566	1000	6270	1980	1800	3650	251	1470
28		3060	5630	1640	471	1100	665	3240	1180	1100	3390	200	3430
Feb. 4		1380	3250	7110	672	1120	659	4010	672	3060	2040	328	1330
11		1010	2850	4140	521	2820	1800	6380	590	2830	3060	435	1070
18		1210	4060	1070	2200	1640	4030	2250	743	2990	5450	311	4600
25		8790	1710	5430	6650	3940	5790	1580	1010	2390	4010	344	2090
Mar. 4		5840	1380	5080	2440	1320	22700	1270	775	1320	1950	3500	4390
11		2470	1320	3130	12100	820	16900	2360	1650	12500	1440	3200	2040
18		2970	3460	6520	2760	2400	6100	1340	866	1970	1820	1100	6910
25		2900	2660	1970	1320	3290	5990	1480	1500	1830	2650	1920	2180
Apr. 1		1680	1300	2640	833	930	4150	1200	2130	2830	1260	6340	8080
8		2010	995	2190	911	561	2020	2220	7560	2090	1870	2550	6780
15		5340	833	4620	1520	5820	1450	1430	2830	1940	2560	8530	5250
22		3920	1160	2140	1070	2380	6050	1130	1720	1050	3240	3260	3740
29		1520	1030	1250	1460	10800	1820	782	2400	1110	1440	1100	3550
May 6		2760	1400	594	975	6090	2560	592	1760	1140	859	578	1210
13		1830	698	300	698	3400	3160	592	4260	769	1090	342	1120
20		3170	1950	369	247	1780	1180	1090	1160	756	552	2530	1960
27		1490	840	202	174	2980	4720	592	7300	762	525	917	3910
June 3		1470	433	169	185	1790	1550	539	1120	1100	853	2240	930
10		846	330	144	321	4330	2460	678	623	351	340	8590	808
17		730	240	112	1240	1830	2550	1050	465	5810	261	2750	500
24		1070	401	305	1070	577	1490	2200	455	1250	135	1160	437
July 1		4020	247	1040	492	788	4390	386	318	1100	292	603	218
8		5020	704	302	1670	583	2070	300	446	519	158	1930	188
15		4130	515	307	5710	2450	4320	239	943	253	255	2780	1030
22		1620	187	613	1560	1710	4390	2020	581	140	249	969	1450
29		762	187	3170	885	465	1600	382	1840	130	192	775	554
Aug. 5		3650	264	762	1250	230	1360	252	3310	506	538	1630	362
12		2020	546	1090	518	581	2820	355	3450	820	1120	1220	209
19		963	422	196	630	7620	1200	314	5120	166	685	445	111
26		623	125	296	2870	6650	1050	216	8330	90	820	1180	175
Sept. 2		240	113	622	2330	2560	1360	104	1340	81	618	1360	227
9		156	74	322	1040	26500	1210	86	534	552	937	3390	5960
16		956	175	138	963	3040	509	126	309	112	782	4260	1690
23		2570	440	97	362	30400	459	104	205	108	265	5170	358
30		8720	154	92	216	2590	441	123	301	192	85	1210	323
Oct. 7		10200	77	31	3400	2640	35300	45	147	267	82	1140	260
14		924	55	50	5260	2290	1430	58	85	432	83	1010	180
21		558	68	84	1440	840	801	83	150	7240	118	490	190
28		756	123	54	505	827	1160	65	119	891	52	285	136
Nov. 4		736	216	64	395	743	2100	106	102	1300	84	349	384
11		532	246	86	351	672	5000	211	137	4090	96	566	1320
18		576	405	133	808	532	2590	266	132	1380	88	461	2440
25		1630	395	338	1500	581	2360	406	144	1610	86	390	652
Dec. 2		1030	196	242	704	490	4580	231	227	3110	93	10100	563
9		1110	224	249	13600	545	6150	995	1790	891	127	4340	505
16	618	2370	170	589	2000	503	1760	704	1360	9040	191	1010	2860
23	646	762	541	531	4460	743	2000	659	1430	4070	153	2800	1200
31	904	2130	924	4160	769	526	2650	2890	1690	10800	175	1580	592
Maximum		10200	14000	7110	13600	30400	35300	6380	8330	14000	5450	10100	8080
Minimum		156	55	31	174	230	441	45	85	81	52	200	111



## Cape Fear River at Lillington, N. C.

## Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Jan. 7	16200	13600	2100	1710	808	2410	488	2770	4990	2800
14	10700	4680	4700	1380	969	1090	344	1650	1470	3620
21	10500	9370	1310	2620	3240	2340	296	9370	7490	2000
28	4730	7950	1320	2330	795	1380	337	3930	1150	1400
Feb. 4	2620	10600	1200	4430	808	1140	400	6780	711	866
11	8270	4350	885	11800	8460	801	1020	7690	2570	1090
18	16300	2860	814	12000	3000	2340	3790	2020	9690	7360
25	3460	5000	924	3680	5240	1090	3110	1200	6090	10300
Mar. 4	1710	3070	1340	16100	1740	756	3070	963	3020	4900
11	1760	2800	1980	5430	2060	4250	7690	7110	5190	4080
18	8270	2810	2760	3750	4980	1740	2240	2140	7620	1540
25	9430	2060	1440	2140	1760	950	2390	6250	12400	1380
Apr. 1	7430	1770	885	3630	2120	5370	1950	3090	6910	1220
8	20700	3800	1600	2830	1440	8460	975	1280	2810	814
15	13000	2970	5170	1710	4020	2740	1880	1710	9950	622
22	1950	1680	950	2260	2780	1080	646	8080	4840	1540
29	1430	7040	833	1400	1830	2560	428	2310	3210	2550
May 6	982	2860	430	5410	969	820	549	956	1380	995
13	672	1230	326	1340	743	581	323	753	3650	609
20	519	1590	530	917	579	368	3220	775	827	1580
27	370	698	1430	808	1310	286	3940	930	698	872
June 3	262	574	1470	615	2920	846	594	885	775	749
10	491	988	1600	1230	891	1180	2310	1470	330	373
17	943	642	924	1010	659	1020	3000	2360	271	274
24	4940	698	3460	600	1070	385	730	1280	335	211
July 1	2290	258	2600	282	382	357	467	698	233	212
8	1290	814	1830	898	602	1370	420	2730	241	450
15	498	672	1190	827	610	4320	586	12000	2440	463
22	1060	537	1520	2110	509	3220	448	2780	7620	5340
29	1040	969	14700	2710	262	1080	444	1270	691	2180
Aug. 5	4700	1070	1880	1450	184	397	289	563	1980	963
12	3110	904	1510	2220	210	196	587	295	2820	557
19	698	1900	479	6910	8850	140	2310	279	339	704
26	315	2870	335	6590	1130	479	2500	171	255	4530
Sept. 2	1140	5570	590	9110	782	342	382	1050	204	450
9	266	4330	546	930	571	565	3360	665	162	521
16	1060	1300	256	437	529	218	1110	534	717	4570
23	392	406	924	437	244	94	226	505	1280	61200
30	337	267	309	352	189	94	911	379	2240	1580
Oct. 7	1800	956	316	592	139	76	457	184	12100	1490
14	4660	924	259	317	143	67	334	120	630	1960
21	2970	820	138	253	85	52	1010	114	2350	678
28	1030	1090	202	207	88	94	1310	106	2900	1210
Nov. 4	558	1010	211	262	247	105	995	149	698	579
11	536	465	296	395	331	52	500	368	527	627
18	1210	1510	231	288	6910	54	589	299	605	627
25	530	646	3250	603	1100	70	2270	195	627	988
Dec. 2	538	652	1150	420	678	79	1670	192	5420	1010
9	2510	622	1870	345	526	395	3510	240	2110	6140
16	8850	547	1780	336	471	320	2290	245	2790	2180
23	5280	568	814	360	1510	228	1960	200	1200	2090
31	1300	1430	3770	1680	2180	717	3500	1710	1090	11500
Maximum	16300	10600	14700	16100	8850	8460	7690	12000	12100	61200
Minimum	262	258	138	207	85	52	226	106	162	211



Cape Fear River at Lock #3, near Tarheel, N. C.

Location.-Water-stage recorder, 100 feet above concrete dam and lock, lat. 34°50'00", long. 78°48'30", 1 mile downstream from county line and 7 miles north of Tarheel, Bladen County. Datum of gage is 29.75 feet above mean sea level (levels by Corps of Engineers, U. S. Army). Auxiliary water-stage recorder in lower pool about 600 feet downstream at same datum.

Drainage area.- 4,810 square miles.

Records available.- October 1937 to date.

Average discharge.- 8 years, 3,050 million gallons per day.

Extremes.- Maximum discharge not determined, see Cape Fear River at Fayetteville, (gage height, 43.44 feet); minimum discharge, 129 million gallons per day, (regulated) Oct. 20, 1940, (gage height, 0.42 feet).

Remarks.- Slight diurnal fluctuation and some regulation for short periods at low flow caused by power plants above station.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1937										1290	1371	1394	
1938	2853	1439	2145	3339	1262	2723	5512	1392	1583	736	1756	3008	2319
1939	3160	11970	8165	3483	2652	1236	2778	7875	1674	831	919	1262	3789
1940	2337	5785	3843	3681	1391	1716	704	2749	609	262	2459	1442	2230
1941	2231	1782	3674	5154	820	1097	3424	764	480	282	298	926	1744
1942	848	2778	5781	1856	2632	1948	760	3430	2384	1499	1735	3547	2435
1943	7061	4809	5740	4736	1453	1879	6499	959	1074	439	654	1270	3043
1944	5782	7758	10769	8217	2612	730	3814	2054	1110	5546	1496	3462	4445
1945	3263	6563	3767	1886	1383	684	2870	3152	18146	2355	1512	7500	4393

Cape Fear River at Lock #3, near Tarheel, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1937										2730	3150	2860	
1938	10600	2230	7490	19400	5220	5940	29700	3150	5660	1230	7820	11000	29700
1939	6720	29700	25800	10700	13600	2730	9880	27100	9690	1810	1550	4360	29700
1940	7490	17800	13600	7110	1970	7950	1710	17500	1070	351	18000	3880	18000
1941	5050	5780	11400	16000	2010	5120	8790	1780	1270	640	446	2430	16000
1942	1270	14700	16000	5050	10900	6170	1270	11800	11600	3420	8460	11400	16000
1943	24700	17100	16800	22400	3350	6850	22500	3060	2910	6720	1680	5590	24700
1944	21600	18100	26800	26500	11400	1060	20000	9040	3060	29700	7620	11200	29700
1945	7880	16000	9110	6360	3720	1270	10300	11200	72400	6980	2100	23100	72400

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1937										556	736	775	
1938	1320	930	975	1100	491	1100	659	523	627	346	523	1140	346
1939	1800	4680	2230	1690	853	570	641	1800	678	472	672	672	472
1940	1100	1550	1860	1500	711	479	284	266	271	168	269	645	168
1941	1050	1100	1100	1320	321	382	523	363	183	181	186	240	181
1942	612	704	1850	730	514	572	495	344	601	549	704	1370	344
1943	1910	1570	1470	1740	685	458	1280	403	332	326	428	495	326
1944	1800	1470	2980	3060	1140	507	507	533	415	717	782	1470	415
1945	1470	1270	1800	853	652	428	439	1080	795	1230	1180	1570	428



## Cape Fear River at Lock #3, near Tarheel, N. C.

## Mean Weekly Discharge in Million Gallons per day

Week Ending	1937	1938	1939	1940	1941	1942	1943	1944	1945		
Jan. 7		2000	2910	1580	2900	1070	5410	7170	3590		
14		6010	1990	1830	1530	879	2830	3480	4860		
21		1970	3970	4440	2700	724	10700	11500	2980		
28		1940	3400	1850	1780	756	7240	2710	2350		
Feb. 4		1750	5310	1550	1740	788	9500	1750	1510		
11		1450	11600	9560	1240	1560	9750	3860	1920		
18		1210	18000	4910	2840	2730	3350	12800	7430		
25		1140	6980	6910	1720	5610	2020	10700	12100		
Mar. 4		1760	21600	2960	1290	3310	1630	5430	8080		
11		1940	10200	3080	5510	10000	8790	8200	5710		
18		3770	5670	6720	2990	5220	3400	11800	2770		
25		2020	3550	3130	1720	4660	7690	17500	2260		
Apr. 1		1100	4380	3060	6320	3610	5120	9750	2020		
8		2100	3870	2510	10500	1900	2280	5620	1360		
15		8140	2720	4930	4680	3130	2670	12500	1020		
22		1960	4170	4160	1890	1410	9300	9430	1990		
29		1790	2110	3220	3790	917	5260	5210	3150		
May 6		866	6650	1680	1560	1180	1690	2780	1630		
13		775	2200	1300	1000	743	1250	5480	995		
20		891	1520	1050	717	4270	1380	1630	1800		
27		1380	1260	1560	508	4880	1200	1410	1370		
June 3		2370	1090	3420	410	1000	1620	1240	1060		
10		2560	1780	1700	1870	2280	1630	698	627		
17		1850	1430	1220	1160	3990	3460	685	598		
24		3950	1130	1320	685	1070	1750	840	636		
July 1		3170	698	630	930	801	1010	581	749		
8		2220	1700	814	1710	616	4280	607	975		
15		1320	1760	840	5040	795	14000	2020	937		
22		1490	2660	866	6120	678	6340	12000	6780		
29		17300	4960	424	1830	930	3210	1490	2970		
Aug. 5		3330	3060	329	930	582	1650	3640	3540		
12		2340	3210	678	640	1020	846	4200	3110		
19		814	6010	9170	572	6120	988	995	1640		
26		583	11400	1740	762	6720	645	599	5550		
Sept. 2		1020	14300	846	982	1380	1430	612	1330		
9		1300	2050	814	846	4630	820	503	1480		
16		808	1060	801	512	3120	1140	840	2950		
23		3060	891	431	266	827	1010	2030	58500		
30		1370	1060	338	251	1300	1060	1190	14600		
Oct. 7	1000	1000	1380	303	316	1120	522	16000	2630		
14	1570	698	846	277	246	717	388	1260	3600		
21	969	530	659	216	220	1780	395	1440	1630		
28	1580	730	579	244	219	1940	402	5330	1900		
Nov. 4	1410	678	672	371	446	1820	490	1200	1410		
11	866	820	866	620	313	969	853	982	1660		
18	2200	672	775	7170	269	1090	762	969	1360		
25	1270	3970	1150	1760	251	1920	545	1130	1540		
Dec. 2	1230	2220	950	995	316	3130	541	5720	1660		
9	1270	2820	827	820	885	3630	632	4080	8850		
16	1020	2660	769	756	730	3990	659	4230	4670		
23	1040	1470	866	1740	603	2970	621	2030	4340		
31	2120	5120	2510	2470	1580	4130	3110	1680	13000		
Maximum		17300	21600	9170	10500	10000	14000	17500	58500		
Minimum		530	579	216	219	582	388	503	598		



Deep River at Moncure, N. C.

Location.--Water-stage recorder, lat. 35°36'25", long. 79°05'10", 1½ miles northwest of Moncure, Chatham County. Datum of gage is 185.88 feet above mean sea level (levels by Corps of Engineers, U. S. Army).

Drainage area.--1,410 square miles.

Records available.-- May 1898 to December 1899 (fragmentary), July 1930 to date.

Average discharge.-- 12 years (1930-45), 887 million gallons per day.

Extremes.-- 1930-45: Maximum discharge 51,870 million gallons per day Sept. 18, 1945 (gage height, 17.20 feet); minimum discharge 6.1 million gallons per day Nov. 11, 1941.

Remarks.-- Diurnal fluctuation and considerable regulation for short periods caused by power plants above station.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1930							*329	95	43.5	18.2	55.2	567	
1931	640	274	627	1480	1798	152	307	2494	116	30.4	21.5	794	735
1932	2205	1120	1943	618	426	658	105	215	141	1139	1067	2901	1049
1933	1477	1557	817	903	255	92.4	98.8	280	136	44.4	28.2	22.4	469
1934	84	321	1105	1481	461	1227	678	374	1536	286	672	1470	808
1935	1446	1461	1981	1908	680	193	269	73	1058	82.7	519	472	839
1936	4152	3346	2600	4170	238	1026	457	730	206	1107	253	1432	1636
1937	3702	1881	1172	1620	539	205	205	802	385	141	182	252	919
1938	788	319	611	884	351	631	1579	336	219	71.1	357	810	583
1939	975	4089	2174	829	623	279	589	2050	178	89.1	101	202	997
1940	523	1768	1163	952	424	375	109	818	101	28.6	694	431	610
1941	649	435	1279	1650	179	186	931	93	42.2	27.6	9.1	126	467
1942	110	1009	1791	417	811	488	165	460	474	202	506	1198	634
1943	2277	1293	1906	1448	344	408	2019	162	138	28.0	53.6	201	861
1944	1387	2213	2916	2094	686	91.7	1731	605	630	1493	492	815	1262
1945	945	2391	1061	658	373	95.6	852	595	6835	586	298	2671	1433

\* Record of July 17 to 31.

Deep River at Moncure, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum
1930							*1650	375	110	39	189	3460	
1931	1680	472	1880	7110	8660	312	1550	10500	386	62	83	4150	10500
1932	12300	2550	11500	1650	1220	3550	386	2090	956	9560	5830	8400	12300
1933	4660	4020	1960	3020	621	248	353	904	711	129	62	104	4660
1934	205	3140	6020	7240	3550	7110	3710	1380	7880	969	8790	10000	10000
1935	7110	7690	8080	5810	3700	600	1600	172	10800	200	3230	3200	10800
1936	12000	12000	12300	18600	480	7360	5390	4790	1120	5620	782	3880	18600
1937	9240	6180	3200	6850	1700	430	872	3090	1820	389	678	891	9240
1938	4940	7170	3360	6340	3620	1960	11600	1290	982	214	3030	4960	11600
1939	4480	11800	8980	2380	4170	982	4040	9950	581	185	313	1010	11800
1940	3430	7750	6720	2970	3880	4170	235	7170	245	64	6720	1510	7750
1941	1830	2070	5980	7950	388	646	3320	711	97	90	15	717	7950
1942	308	7950	7430	2270	6720	1940	348	3490	4530	646	4420	5090	7950
1943	11500	7950	8460	9430	1200	2250	10500	898	423	132	151	1460	11500
1944	8140	6590	9690	10100	5760	194	13200	4660	11200	10300	4280	4100	13200
1945	3010	7750	4470	3930	1290	245	4520	6200	42900	3460	440	8790	42900

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum
1930							*21	21	14	13	12	36	
1931	209	132	201	391	292	47	40	222	30	23	12	14	12
1932	338	460	391	249	185	109	29	32	25	33	282	264	25
1933	557	678	460	302	67	26	25	129	15	21	11	7.8	7.8
1934	37	41	213	129	43	65	85	97	65	53	101	268	37
1935	448	328	600	543	297	25	26	27	33	19	106	141	19
1936	233	526	446	468	73	50	59	57	41	120	134	168	41
1937	963	704	576	480	169	46	25	123	36	29	65	62	25
1938	249	188	212	165	43	165	53	57	48	21	33	132	21
1939	320	808	435	333	99	51	43	203	54	34	40	53	34
1940	89	233	398	318	111	81	57	43	39	12	16	65	12
1941	216	167	208	252	32	26	65	35	27	13	6.5	9.0	6.5
1942	45	73	338	127	51	53	50	40	21	23	47	249	21
1943	338	343	323	343	143	65	189	30	39	7.8	14	24	7.8
1944	245	71	415	523	153	32	54	41	29	71	101	308	29
1945	348	289	365	141	101	57	65	54	65	208	212	335	54

\* Record of July 17 to 31.



Mean Weekly Discharge, in Million Gallons per day of Deep River  
at Moncure, North Carolina

Week Ending	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Jan. 7		698	1320	995	72	2780	7560	4540	995	594	230	950	194	904	1840	1230
14		795	6850	1780	118	1530	4520	1930	1560	652	429	357	107	691	526	1370
21		814	646	1650	68	528	4590	3730	409	1060	1280	827	72	4910	3260	853
28		408	443	1740	81	1340	1440	3460	382	975	284	493	64	1430	402	573
Feb. 4		229	1250	820	120	474	1500	4390	388	2110	240	415	123	2750	241	357
11		190	1010	1510	134	382	3800	2050	286	5480	3640	258	427	3270	1410	445
18		299	1410	2340	94	2580	6980	1100	241	4990	1090	859	2180	691	4240	3410
25		386	1130	1520	107	775	1350	2330	272	1360	2090	342	1130	428	2110	4680
Mar. 4		290	521	808	1170	2390	724	1400	386	7690	723	271	1980	364	1470	2270
11		885	5870	641	1120	853	917	1200	827	1970	775	2110	3690	3310	2090	1580
18		306	788	904	294	3070	3770	1340	1010	1400	2540	600	634	749	3110	623
25		665	788	1250	795	840	3770	917	450	665	619	425	1110	3110	4830	550
Apr. 1		904	1110	506	3330	3990	2870	795	291	1690	937	2830	820	1180	2820	561
8		3540	782	1100	963	2750	9950	1600	795	982	561	4100	340	505	1020	351
15		898	717	1210	2730	2020	6200	1260	2340	605	1870	924	917	762	4400	263
22		678	377	982	1320	1540	827	762	319	1030	840	408	255	4020	1960	808
29		982	517	474	359	1270	665	2820	273	482	569	1120	168	743	1150	1270
May 6		840	526	331	109	457	406	1200	133	1690	315	315	160	381	643	402
13		2220	347	404	82	448	293	5070	115	426	231	256	96	321	1700	221
20		455	267	224	1160	519	201	672	127	343	201	156	1370	302	313	594
27		4270	382	138	187	1460	157	276	833	323	518	101	1830	366	326	273
June 3		376	493	126	1160	297	109	233	461	250	1470	90	226	310	222	290
10		194	127	101	3510	383	224	286	846	457	261	351	665	347	98	145
17		140	2010	119	730	151	309	236	417	360	179	174	1000	840	107	82
24		129	357	66	267	146	2870	180	904	200	260	116	216	353	75	75
July 1		78	303	106	147	58	975	96	509	132	112	114	161	163	64	62
8		158	178	53	1180	56	414	173	462	369	98	717	145	1560	236	151
15		221	82	101	1030	548	233	210	244	234	137	2050	163	5690	2450	659
22	665	204	65	101	429	408	240	125	578	904	123	943	195	1210	453	1800
29	125	717	48	112	199	152	130	318	5480	846	91	343	173	378	301	988
Aug. 5	116	2090	450	205	287	96	1740	310	659	453	59	112	89	189	1040	432
12	84	1510	366	348	308	54	1690	263	393	1000	56	68	52	107	1470	239
19	91	2050	81	187	200	44	241	659	156	2810	3180	52	917	140	152	159
26	99	5030	53	249	665	66	120	1230	107	2250	227	164	924	81	89	1830
Sept. 2	55	528	59	251	388	107	467	1470	395	2880	187	74	124	375	88	186
9	57	143	351	264	2020	3130	94	872	291	266	131	61	1300	87	52	161
16	41	119	67	187	1780	1060	528	277	99	147	95	40	275	123	344	3360
23	52	68	50	39	1800	152	135	105	377	95	60	28	100	146	541	25200
30	21	67	118	48	937	171	87	89	120	110	78	38	314	140	1730	543
Oct. 7	16	37	196	73	536	111	495	94	100	137	53	24	165	58	4010	956
14	21	26	147	32	428	80	2380	72	122	98	33	26	105	15	264	619
21	23	32	4320	39	147	52	1680	118	35	75	14	26	99	12	1210	284
28	14	25	280	39	117	59	275	198	40	60	20	25	373	14	1000	612
Nov. 4	14	25	475	37	167	151	157	212	63	59	17	28	244	35	267	273
11	19	16	1560	31	205	736	194	92	94	70	65	6.5	137	61	180	309
18	50	15	482	28	177	1060	443	380	52	72	2490	9	224	78	180	264
25	106	16	630	23	129	216	211	127	1070	178	273	10	1270	47	224	311
Dec. 2	68	40	1020	19	4890	210	222	176	347	118	186	97	535	45	2200	351
9	466	1160	317	14	1610	182	1180	141	717	92	163	81	1530	56	769	2850
16	200	743	5260	21	368	1100	2320	138	508	81	130	72	795	70	1070	1190
23	247	859	1760	17	1180	428	1740	169	230	95	590	50	853	56	447	1030
31	1380	659	4710	38	614	267	904	524	1800	510	853	307	1790	612	445	5820
Maximum		5030	6850	2340	4890	3990	9950	5070	5480	7690	3640	4100	3690	5690	4830	25200
Minimum		15	48	14	68	44	87	72	35	59	14	6.5	52	12	52	62



# Deep River at Ranseur, N. C.

Location.-- Water-stage recorder, lat. 35°44'10", long. 79°38'40", 2,000 feet downstream from railroad station at Ranseur, Randolph County, and 1½ miles downstream from Sandy Creek. Datum of gage is 419.50 feet above mean sea level (levels by Corps of Engineers, U. S. Army).

Drainage area.-- 346 square miles.

Records available.-- November 1922 to date.

Average discharge.-- 23 years, 228 million gallons per day.

Extremes.-- Maximum discharge, 27,800 million gallons per day, Sept. 18, 1945 (gage height, 34.04 feet); minimum discharge, 0.26 million gallons per day, (regulated) May 27, Nov. 28, 29, 1941 (gage height 0.27 feet).

Remarks.-- Flow slightly regulated by High Point Reservoir and small power-plant reservoirs.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1922												154	
1923	321	386	922	356	202	95.6	294	99.5	88.5	31.8	66.5	118	248
1924	302	337	337	433	269	119	204	88.5	337	114	74.3	201	234
1925	1068	287	238	138	144	49.3	47.5	52.9	26.1	20.8	38.2	60.4	182
1926	318	478	311	286	59.8	56.3	147	86.6	26.2	8.59	55.4	329	178
1927	123	417	392	116	75.6	133	287	165	73.0	468	101	593	245
1928	165	371	255	637	364	209	118	370	1247	145	80.8	80.1	335
1929	97.5	782	832	366	284	269	311	124	59.5	652	287	300	362
1930	373	346	176	141	109	104	127	37.1	20.8	10.9	29.7	161	135
1931	190	84.6	184	360	257	51.5	125	293	32.7	9.88	13.4	113	143
1932	526	253	468	161	83.3	167	32.5	37.7	38.8	317	280	678	255
1933	284	368	243	197	68.5	31.1	30.0	112	25.5	24.9	12.7	25.3	117
1934	51.2	194	439	375	132	373	160	103	565	107	138	379	251
1935	320	266	525	500	264	78.2	151	28.9	109	21.9	79.5	80.1	202
1936	978	689	598	930	71.7	118	165	167	46.5	443	83.3	331	384
1937	1072	374	262	417	182	71.1	96.3	350	165	102	98.8	103	275
1938	251	122	218	179	100	180	401	123	39.5	25.0	132	272	171
1939	253	886	528	202	141	74.9	221	579	57.4	38.2	50.1	86.6	256
1940	148	442	247	227	365	130	71.1	449	60.3	18.9	316	156	218
1941	209	118	258	260	60.9	61.2	227	27.3	19.1	5.61	9.11	28.2	107
1942	26.4	244	438	80.8	173	135	82.0	67.2	147	52.7	65.9	251	147
1943	455	320	422	306	135	119	373	85.9	56.1	22.0	36.5	80.8	201
1944	357	495	680	501	132	32.3	296	43.9	35.7	219	148	191	287
1945	215	545	240	183	140	34.0	209	37.1	1198	99.5	78.8	563	293



## Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1922												517	
1923	1150	1490	6030	1620	659	375	2100	401	297	48	262	366	6030
1924	1850	2660	924	2160	1030	329	1090	417	5450	866	326	1400	5450
1925	4750	1220	1300	328	563	98	384	441	65	93	85	285	4750
1926	3090	1870	1140	2780	96	206	1270	474	71	18	270	3570	3570
1927	456	1750	2110	238	258	579	1230	795	383	3480	646	4370	4370
1928	583	1440	1450	4150	1730	1410	866	2330	12300	561	126	168	12300
1929	191	8910	6200	3060	814	1020	2580	846	177	10000	963	1580	10000
1930	2250	1470	534	499	437	386	1540	60	39	35	112	911	2250
1931	820	124	982	1980	1140	153	975	1360	67	21	20	384	1980
1932	4550	775	5280	717	401	1440	90	244	196	5560	1680	2390	5560
1933	937	866	995	879	123	63	118	529	70	113	31	55	995
1934	123	1940	2760	2890	1000	2250	879	646	3880	537	1470	5680	5680
1935	2390	1120	3590	2510	2220	416	1460	79	1430	52	399	311	3590
1936	5920	4630	4010	7040	140	568	1090	1930	171	5880	249	1150	7040
1937	4960	885	519	2580	917	134	351	1740	1470	527	380	320	4960
1938	1870	297	1680	1040	795	833	3300	470	98	68	1820	2630	3300
1939	1080	3900	2870	454	711	312	2240	3660	137	111	99	500	3900
1940	1120	3230	1150	924	4190	436	150	3810	251	61	3230	476	4190
1941	724	466	1600	1590	149	138	1200	119	106	16	57	86	1600
1942	68	3390	3440	164	2240	762	450	214	2340	264	393	1200	3440
1943	2380	2710	2270	2620	1100	326	1430	1250	201	46	136	452	2710
1944	1890	2970	2280	4500	563	65	3290	149	9040	2200	1230	879	9040
1945	769	2480	685	872	405	98	1450	70	18000	360	232	2920	18000

## Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1922												33	
1923	78	99	165	97	78	52	32	35	29	10	25	41	10
1924	87	44	115	140	103	54	54	16	19	19	12	49	12
1925	162	128	78	72	30	17	12	6.5	9.7	6.5	7.1	17	6.5
1926	19	83	101	99	28	19	21	7.1	7.1	6.5	10	18	6.5
1927	56	49	72	63	25	28	35	35	25	23	25	63	23
1928	77	171	90	92	114	61	37	30	73	50	35	36	30
1929	49	45	196	117	106	90	85	52	32	34	85	122	32
1930	92	141	98	60	32	29	25	16	7.8	5.2	11	21	5.2
1931	57	35	57	92	41	13	11	28	10	3.9	8.4	14	3.9
1932	63	90	68	60	32	19	16	12	10	17	65	50	10
1933	121	138	106	66	23	12	13	20	12	7.8	5.2	5.2	5.2
1934	6.5	18	37	32	12	10	40	29	26	7.1	7.1	65	6.5
1935	83	66	94	129	74	7.8	8.4	6.5	7.8	9.0	17	14	6.5
1936	74	96	101	110	22	19	18	23	10	45	26	57	10
1937	257	191	162	111	48	19	22	30	27	14	16	32	14
1938	78	78	71	19	20	29	26	12	12	12	7.1	9.0	7.1
1939	101	156	128	103	16	15	15	52	12	7.8	7.1	10	7.1
1940	27	64	99	72	19	23	20	15	1.9	3.6	3.6	9.7	1.9
1941	81	31	25	30	.71	.90	12	.71	1.42	1.16	.45	1.16	.45
1942	1.10	2.84	56	4.07	1.16	1.16	2.91	1.49	5.0	3.2	2.97	41	1.10
1943	30	39	94	48	12	12	41	7.1	7.1	6.5	7.1	7.8	6.5
1944	24	25	48	116	24	10	19	-----	-----	28	25	67	10
1945	65	70	66	29	36	20	26	9.0	9.0	28	22	28	9.0



Deep River at Ramseur, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Jan. 7		453	233	924	47	134	165	89	170	323	325	233
14		253	114	1720	63	81	165	130	214	233	1600	520
21		125	665	1610	866	182	116	92	846	169	131	209
28		441	260	352	169	98	222	83	328	89	97	219
Feb. 4		321	137	337	917	108	278	76	476	67	437	169
11		611	107	398	226	91	527	280	496	65	285	312
18		328	96	306	106	468	322	352	266	96	229	523
25		147	756	176	711	937	357	541	178	110	207	405
Mar. 4		488	582	136	314	302	165	2550	140	95	105	242
11		510	355	174	307	1070	189	1390	254	171	1350	157
18		2450	325	304	571	262	441	424	144	89	145	238
25		730	364	368	173	136	284	943	186	203	209	426
Apr. 1		213	174	149	277	99	162	336	132	375	420	167
8		414	311	107	163	102	110	182	243	820	193	197
15		526	594	118	641	135	769	187	140	205	131	331
22		208	636	140	206	112	296	743	109	187	79	179
29		218	182	158	144	124	1460	369	85	229	171	109
May 6		318	371	159	84	129	284	313	74	132	145	92
13		140	372	163	67	109	319	418	92	393	59	90
20		201	239	242	59	48	526	226	138	93	53	61
27		278	177	89	53	38	414	228	76	485	44	47
June 3		133	177	60	32	37	198	294	141	101	99	40
10		83	89	43	33	50	552	329	208	54	30	34
17		163	121	47	31	315	126	198	67	46	538	40
24		67	96	54	123	138	82	177	103	41	68	19
July 1		64	313	45	42	64	86	298	49	36	71	26
8		52	210	112	28	416	58	265	65	72	36	25
15		87	306	36	61	430	158	717	37	70	27	52
22		622	141	25	63	326	209	227	393	57	23	20
29		267	73	26	468	82	75	116	47	339	39	27
Aug. 5		427	121	53	119	129	50	90	37	314	36	73
12		119	103	112	163	80	369	242	39	378	79	44
19		61	128	41	37	74	678	80	43	271	26	238
26		59	37	21	45	375	428	116	36	258	21	76
Sept. 2		52	28	19	53	96	220	63	30	102	18	87
9		109	54	18	42	70	1800	56	17	50	43	38
16		124	46	25	30	119	150	57	12	35	16	19
23		68	118	39	18	63	3070	59	28	28	65	23
30		68	1220	23	15	42	238	69	25	12	39	16
Oct. 7		36	291	8.4	11	982	255	2600	20	12	24	50
14		26	78	15	7.1	866	133	109	7.8	16	34	19
21		29	43	16	7.1	123	105	80	5.8	6.5	1240	15
28		32	60	39	8.4	78	103	96	10	5.8	77	19
Nov. 4		37	59	29	12	57	94	196	12	14	172	18
11		121	72	30	14	55	90	203	22	12	324	15
18		54	37	59	100	185	85	307	37	12	119	9.7
25		47	139	35	58	111	74	234	43	13	178	9.0
Dec. 2	46	56	62	33	72	183	73	419	31	16	479	15
9	67	178	247	32	35	1600	94	474	177	65	98	16
16	147	85	162	32	177	406	75	151	60	149	1030	26
23	291	91	81	105	68	322	90	240	70	154	380	30
31	145	138	333	79	1020	141	62	309	342	113	1280	32
Maximum		2450	1220	1720	1020	1600	3070	2600	846	820	1600	523
Minimum		26	28	8.4	7.1	37	50	56	5.8	5.8	16	9.0



Deep River at Ramseur, N. C.

Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Jan. 7	46	628	2130	1850	448	194	73	334	20	166	621	372
14	71	355	685	348	319	204	158	125	33	109	123	257
21	41	128	1250	1730	129	207	303	271	19	769	691	159
28	55	256	209	496	166	233	87	142	30	609	118	115
Feb. 4	85	109	370	603	131	585	85	105	32	516	79	102
11	43	114	577	441	101	1260	988	91	124	782	310	104
18	37	623	1560	258	99	769	235	194	640	197	1170	1030
25	125	179	306	424	148	243	441	100	149	110	364	866
Mar. 4	833	157	176	313	125	1840	237	90	330	96	204	345
11	463	258	207	251	410	446	180	378	1070	827	458	364
18	71	1000	1180	280	289	415	443	160	169	297	756	145
25	171	267	415	247	125	189	156	120	185	497	885	160
Apr. 1	995	1090	801	189	92	470	193	492	262	207	891	187
8	180	582	2750	426	227	269	194	519	105	114	231	106
15	917	333	820	225	331	142	345	160	102	178	1090	75
22	318	594	210	154	108	192	193	107	56	808	454	233
29	88	251	146	891	83	190	190	260	51	173	294	340
May 6	55	134	112	259	48	298	109	90	33	101	195	114
13	45	241	82	144	45	132	101	87	28	90	211	86
20	273	191	67	309	41	97	61	50	158	96	83	220
27	61	569	50	118	258	72	358	35	518	262	78	134
June 3	319	99	41	81	156	121	1140	47	67	101	52	115
10	1210	146	47	89	129	92	107	78	228	97	41	46
17	114	71	83	68	59	66	114	83	234	163	30	30
24	63	51	255	61	262	37	148	43	65	145	33	25
July 1	70	33	116	61	237	89	71	41	33	91	68	25
8	209	14	169	121	214	139	82	126	32	333	103	46
15	307	452	162	83	137	90	79	398	123	782	840	191
22	65	102	70	67	279	520	81	368	141	375	235	511
29	68	80	31	132	1070	157	51	81	52	118	67	140
Aug. 5	84	35	374	122	231	94	50	48	14	59	98	69
12	47	32	518	280	183	592	39	19	40	30	48	40
19	48	29	67	180	54	1180	1760	16	109	28	28	39
26	234	32	43	685	34	435	98	30	120	29	21	35
Sept. 2	87	17	34	353	121	335	120	34	34	278	23	19
9	244	311	35	447	43	82	77	49	432	78	17	30
16	1400	87	87	98	36	53	43	7.8	71	63	31	365
23	314	30	30	59	39	45	54	11	24	35	116	4630
30	454	34	41	48	28	34	25	12	85	41	1360	99
Oct. 7	228	35	256	52	30	64	22	9.7	46	25	431	129
14	114	18	1150	58	20	44	19	6.1	22	21	48	91
21	48	15	446	138	14	27	11	4.13	30	25	315	79
28	54	17	79	160	37	27	21	3.17	98	24	146	109
Nov. 4	58	26	65	94	25	27	52	5.0	68	23	64	63
11	73	92	76	59	36	48	39	5.8	43	58	57	54
18	57	148	121	167	25	37	111	3.04	36	37	55	61
25	64	41	72	60	409	63	99	17	111	25	50	103
Dec. 2	1320	66	74	117	101	54	87	11	90	29	538	112
9	194	42	255	78	290	36	68	25	419	34	181	549
16	92	140	495	70	147	49	77	21	171	33	316	152
23	273	87	359	70	68	46	188	23	150	29	110	142
31	144	58	293	184	594	214	295	49	298	218	120	1430
Maximum	1400	1090	2750	1850	1070	1840	1760	519	1070	827	1360	4630
Minimum	37	14	30	48	14	27	11	3.04	14	21	17	19

Deep River near Randleman, N. C.

Location.- Water-stage recorder, lat. 35°54'10", long. 79°51'15", 500 feet downstream from county bridge at Coltrane's mill, half a mile south of Guilford County line, and 7 miles north of Randleman, Randolph County. Datum of gage is 638.11 feet above mean sea level (levels by Corps of Engineers, U. S. Army).

Drainage area.- 124 square miles.

Records available.- October 1928 to date.

Average discharge.- 17 years, 77.7 million gallons per day.

Extremes.- Maximum discharge, 6,160 million gallons per day, Sept. 18, 1945 (gage height, 25.18 feet); minimum discharge, 0.32 million gallons per day (regulated) Nov. 28, 1931, (gage height, 1.41 feet).

Remarks.- Large diurnal fluctuation at low flow caused by Coltrane's mill. Flow slightly regulated by High Point Reservoir.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1928										48.5	24.5	26.6	
1929	30.6	267	251	141	96.9	85.9	78.8	35.5	16.8	191	131	120	120
1930	149	127	59.7	53.2	45.1	38.0	26.7	12.0	15.2	3.75	9.82	62.9	49.9
1931	73.0	32.4	66.5	153	98.8	16.5	74.9	123	11.2	6.98	6.18	42.1	59.1
1932	165	95.6	163	67.2	23.0	65.2	12.3	14.3	9.24	162	97.5	251	94.3
1933	112	119	84.6	61.6	28.4	10.8	13.4	74.9	9.75	6.17	6.22	10.9	44.4
1934	25.1	103	175	149	52.8	137	59.2	14.0	97.5	25.0	33.5	96.3	80.1
1935	96.9	85.3	185	169	91.7	35.9	65.9	12.0	33.1	8.14	37.0	31.4	71.1
1936	384	262	193	342	22.0	27.3	66.5	42.1	29.0	115	31.3	114	135
1937	417	122	74.9	129	67.8	23.3	31.8	67.8	40.2	57.0	41.0	38.6	92.4
1938	87.2	46.1	74.3	42.7	33.8	45.6	132	25.9	8.14	8.91	50.2	91.1	54.1
1939	95.0	317	155	67.2	53.7	29.3	63.4	186	14.3	16.5	17.6	40.0	86.6
1940	61.7	149	73.0	71.1	172	46.6	41.5	187	29.7	10.4	116	57.9	84.6
1941	74.9	36.1	81.4	78.8	18.0	30.0	110	12.7	6.85	5.13	6.85	11.1	39.5
1942	10.2	77.5	176	25.5	61.5	54.3	48.2	32.0	14.3	21.3	15.7	71.1	50.8
1943	163	142	162	102	39.5	45.2	114	46.1	15.1	10.9	12.9	23.3	73.0
1944	118	174	242	216	35.6	16.9	93.0	11.4	107	51.2	55.7	69.8	98.8
1945	78.8	191	74.9	47.4	54.6	12.7	41.7	11.0	279	28.2	33.0	201	86.6



Deep River near Randleman, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1928										138	54	71	
1929	47	3000	795	1270	375	382	522	169	27	2660	444	620	3000
1930	872	573	181	165	450	278	175	60	50	10	38	326	872
1931	304	55	385	840	470	41	413	820	53	27	14	250	840
1932	1290	388	1940	194	88	685	40	83	72	3040	442	1030	3040
1933	525	279	544	370	54	24	60	552	36	32	13	30	552
1934	78	1650	904	1240	313	917	471	48	969	62	380	1340	1650
1935	769	406	1440	891	508	263	642	34	266	24	255	92	1440
1936	2840	1930	1270	2550	52	127	432	248	413	756	77	584	2840
1937	1990	293	149	833	372	38	183	385	412	375	120	92	1990
1938	510	130	593	178	259	390	1110	122	21	20	621	782	1110
1939	632	1350	736	171	316	113	638	1960	37	89	41	326	1960
1940	349	717	313	269	3000	162	154	1690	217	16	1180	217	3000
1941	242	112	562	395	43	206	1200	56	17	8.4	12	36	1200
1942	17	1160	2080	59	639	442	426	138	89	128	39	353	2080
1943	1210	1440	1080	1010	152	239	963	995	39	22	40	129	1440
1944	846	1050	1210	2380	130	172	904	34	2840	282	493	311	2840
1945	324	795	202	167	514	24	359	28	4520	89	116	995	4520

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1928										8.4	10	10	
1929	14	14	50	24	20	16	12	12	7.8	12	21	44	7.8
1930	28	46	32	25	4.0	5.0	4.5	2.6	2.6	1.93	2.2	7.8	1.93
1931	18	10	16	34	16	4.4	2.4	12	1.23	2.3	1.03	2.5	1.03
1932	23	32	26	19	5.2	4.9	2.1	2.5	1.74	3.1	54	17	1.74
1933	31	37	28	6.3	4.4	2.9	2.9	2.9	1.55	1.36	.78	2.3	0.78
1934	4.8	5.4	19	18	10	5.6	4.8	4.8	6.1	4.1	5.2	16	4.1
1935	19	23	30	41	28	5.6	5.8	2.6	4.1	3.9	5.6	6.5	2.6
1936	12	39	33	26	3.8	3.5	3.2	4.8	4.1	12	9.0	17	3.2
1937	75	49	47	27	20	5.8	7.1	5.8	6.2	7.1	17	19	5.8
1938	30	25	25	16	4.9	11	13	3.4	3.4	1.94	5.3	12	1.94
1939	42	50	43	36	28	6.1	10	17	3.6	5.3	7.1	9.7	3.6
1940	15	28	27	19	14	9.7	7.1	5.9	5.8	5.0	7.8	7.8	5.0
1941	32	17	17	26	6.0	6.5	9.7	5.5	2.8	2.8	4.0	3.7	2.8
1942	6.5	9.7	26	12	6.5	6.1	4.0	5.9	3.3	4.7	7.8	15	3.3
1943	17	25	28	27	16	14	16	3.5	7.8	5.8	7.1	7.1	3.5
1944	20	16	36	44	12	5.5	5.2	5.2	4.8	10	11	25	4.8
1945	20	17	29	20	20	7.1	6.5	6.5	7.1	11	13	21	6.5



Deep River near Randleman, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Jan. 7		27	68	127	123	89	20	196	698	711
14		36	142	96	468	221	32	99	240	112
21		30	297	123	48	78	37	38	672	736
28		30	116	31	37	78	20	79	72	172
Feb. 4		26	194	26	171	61	19	37	143	207
11		110	171	26	89	129	11	39	213	134
18		120	98	38	101	155	11	202	600	81
25		161	61	39	68	120	37	56	114	151
Mar. 4		1120	45	36	36	76	595	46	63	97
11		259	80	48	465	65	107	102	69	70
18		105	47	29	48	60	34	371	311	79
25		213	71	83	76	150	71	90	136	70
Apr. 1		96	47	158	141	68	336	360	321	53
8		52	95	393	69	43	76	175	1050	131
15		84	49	65	57	113	368	98	286	72
22		295	41	80	32	62	120	225	71	37
29		142	33	64	96	39	36	89	34	293
May 6		126	25	56	52	37	25	44	36	78
13		120	28	180	21	37	17	129	25	47
20		78	47	34	14	27	90	65	17	138
27		74	11	157	10	16	30	157	21	42
June 3		104	105	30	14	21	129	43	6.1	25
10		118	87	19	12	14	457	69	17	30
17		53	21	17	209	9.0	47	45	23	22
24		40	21	8.4	34	9.0	26	11	39	23
July 1		109	23	14	23	7.1	10	7.8	36	17
8		43	37	69	11	12	34	9.7	67	81
15		178	9.0	26	9.7	7.1	152	197	89	26
22		70	52	16	22	17	35	38	24	15
29		40	14	214	7.1	19	10	41	10	12
Aug. 5		30	9.7	82	20	60	50	21	140	15
12		50	8.4	171	27	21	16	12	112	116
19		25	17	139	5.5	200	12	8.4	17	70
26		50	19	140	8.4	22	6.0	10	12	34
Sept. 2		16	4.8	25	4.5	36	8.4	7.1	11	83
9		19	7.1	21	15	6.5	33	89	13	99
16		21	41	7.8	4.4	19	251	19	32	30
23		17	13	5.0	7.1	7.8	96	17	11	15
30		12	3.7	9.0	12	2.9	37	17	65	16
Oct. 7	77	724	2.6	10	24	5.8	40	7.1	149	25
14	51	37	3.1	4.5	7.8	3.2	33	7.1	172	25
21	26	23	3.9	7.8	639	4.4	10	7.1	162	76
28	38	46	3.4	5.7	31	10	23	7.8	19	104
Nov. 4	37	101	7.1	6.1	59	7.1	9.7	13	29	42
11	35	70	7.1	6.5	127	6.1	12	26	21	25
18	22	192	17	6.5	61	6.3	9.0	85	45	62
25	21	105	8.4	7.1	61	5.8	19	13	29	28
Dec. 2	31	182	10	4.5	139	7.1	326	33	25	52
9	23	185	81	15	37	10	59	14	76	32
16	31	59	23	36	282	9.0	28	50	137	27
23	26	80	29	70	141	14	61	43	132	29
31	17	117	123	56	558	12	42	23	133	63
Maximum		1120	297	393	639	221	595	371	1050	736
Minimum		12	2.6	4.5	4.4	2.9	6.0	7.1	6.1	12

Deep River near Randleman, N. C.

Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1938	1939	1940	1941	1942	1943	1944	1945		
Jan. 7	147	66	30	127	11	46	200	150		
14	103	74	79	44	8.4	34	39	94		
21	50	72	100	96	12	322	234	54		
28	65	81	45	50	9.0	207	38	38		
Feb. 4	52	249	39	34	13	174	26	29		
11	39	401	247	30	26	377	101	36		
18	36	275	85	52	209	81	435	388		
25	57	85	136	30	50	41	125	282		
Mar. 4	53	636	79	29	78	35	67	98		
11	158	166	54	105	523	300	162	113		
18	72	122	121	52	57	145	211	49		
25	41	61	47	42	57	192	298	60		
Apr. 1	32	104	60	163	90	65	395	59		
8	45	90	64	152	34	37	75	35		
15	70	48	98	51	34	59	534	27		
22	36	58	74	34	19	269	162	37		
29	26	65	56	79	15	57	125	91		
May 6	16	114	32	26	13	34	57	38		
13	13	47	26	24	11	35	54	27		
20	19	35	19	14	21	39	25	58		
27	85	32	107	12	216	55	21	96		
June 3	34	50	630	19	21	28	14	39		
10	30	35	39	23	81	33	12	16		
17	21	24	36	57	107	49	14	14		
24	30	12	55	17	25	74	12	9.7		
July 1	101	34	25	25	14	36	72	9.7		
8	111	60	61	47	40	72	25	11		
15	28	29	46	120	63	261	256	50		
22	45	132	48	275	89	121	65	30		
29	372	36	19	36	16	38	17	83		
Aug. 5	80	26	19	19	11	16	22	17		
12	39	93	15	11	37	12	13	14		
19	9.0	512	724	9.0	65	8.4	7.8	10		
26	5.7	125	37	17	24	9.0	6.3	8.4		
Sept. 2	9.0	88	79	9.7	11	171	8.4	8.4		
9	7.1	21	26	11	25	19	7.1	12		
16	9.0	10	33	3.9	11	11	11	85		
23	8.4	12	14	5.4	8.4	17	16	1070		
30	8.4	8.4	16	6.5	15	10	424	28		
Oct. 7	9.0	34	9.0	4.4	10	11	76	36		
14	7.1	13	11	6.0	12	9.7	19	26		
21	7.1	10	10	4.7	10	11	85	21		
28	11	12	10	4.7	53	9.7	41	33		
Nov. 4	10	12	28	5.9	19	12	19	18		
11	10	16	16	7.8	12	17	18	17		
18	9.0	12	393	7.1	12	13	17	17		
25	162	27	41	7.1	19	10	19	61		
Dec. 2	35	16	37	7.1	33	12	202	44		
9	116	17	26	14	107	12	67	191		
16	52	17	39	11	48	9.7	125	47		
23	25	27	70	8.4	39	8.4	37	39		
31	178	97	99	12	89	61	42	530		
Maximum	372	636	724	275	523	377	534	1070		
Minimum	5.7	8.4	9.0	3.9	8.4	8.4	6.3	8.4		



East Fork Deep River near High Point, N. C.

Location.-- Water-stage recorder, lat. 36°02'15", long. 79°56'45", at highway bridge a quarter of a mile upstream from High Point Reservoir and 6 miles northeast of High Point, Guilford County.

Drainage area.-- 14.2 square miles.

Records available.-- July 1928 to date.

Average discharge.-- 17 years, 9.74 million gallons per day.

Extremes.-- Maximum discharge, 2290 million gallons per day June 8, 1934 (gage height 7.5 feet) from rating curve extended above 1,000 million gallons per day, by contracted-opening computation at gage height 10.87 feet; minimum discharge, 0.45 million gallons per day Sept. 22, 1941 (gage height, 0.16 foot).

Remarks.-- Records good.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly mean
1928								11.8	40.8	4.97	4.01	3.81	
1929	4.04	37.0	20.3	18.9	7.95	11.8	10.9	7.82	3.36	30.1	13.5	14.3	14.9
1930	15.9	15.0	8.01	6.78	6.85	4.78	2.84	2.39	1.81	2.00	4.13	11.1	6.78
1931	7.82	4.18	8.40	17.6	14.8	3.37	4.99	17.0	2.66	2.25	2.43	5.65	7.62
1932	16.3	10.6	25.5	6.38	4.35	10.8	3.79	2.68	2.67	24.1	11.2	31.3	12.5
1933	14.5	20.2	11.2	10.2	4.41	3.06	3.56	20.7	2.60	1.78	1.96	2.43	8.01
1934	3.44	36.3	17.2	13.1	6.72	17.3	10.4	2.56	20.0	3.44	5.72	9.56	12.0
1935	10.1	9.69	22.0	18.9	14.3	4.10	4.35	2.40	5.77	2.40	6.44	4.06	8.72
1936	43.4	29.0	19.3	37.3	3.80	4.09	11.1	5.10	9.50	7.95	3.86	15.1	15.8
1937	43.9	13.8	8.72	13.8	9.37	4.52	4.05	4.75	5.33	7.43	5.21	4.69	10.5
1938	9.43	5.57	8.66	4.60	4.10	5.66	15.7	2.91	1.82	1.83	6.41	8.66	6.30
1939	9.24	33.3	12.6	6.37	5.19	6.72	4.73	28.6	2.93	3.26	2.97	5.38	9.95
1940	6.29	14.7	7.36	10.1	21.3	5.87	7.75	25.9	5.16	2.91	14.7	7.24	10.8
1941	9.04	4.77	7.24	8.85	2.95	6.91	7.62	1.85	1.64	1.21	1.52	2.28	4.66
1942	2.79	9.95	21.8	3.57	6.18	6.22	6.52	5.44	2.89	5.06	3.23	9.17	6.91
1943	19.2	15.4	17.0	10.9	4.77	8.20	8.53	2.91	2.34	2.09	2.51	3.71	8.08
1944	11.2	17.3	27.4	22.1	5.76	2.91	6.59	3.77	9.37	5.82	8.72	8.27	10.7
1945	9.75	23.3	7.62	4.75	14.1	3.25	3.13	2.27	32.9	3.79	6.41	26.1	11.4



East Fork Deep River near High Point, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of year
1928								85	581	11	4.4	4.8	
1929	7.1	468	206	221	53	74	92	57	4.5	450	33	97	468
1930	97	76	28	37	45	26	7.8	9.7	3.7	2.5	29	97	97
1931	46	9.0	38	81	104	17	28	184	8.4	2.5	2.6	37	184
1932	131	49	375	17	19	93	26	17	19	592	67	145	592
1933	71	94	136	81	17	17	28	162	4.3	2.1	2.6	6.5	162
1934	8.4	833	133	143	41	278	102	7.1	187	7.8	45	114	833
1935	61	57	121	131	83	12	17	4.3	46	5.6	67	14	131
1936	510	230	120	364	7.1	16	132	30	211	56	14	129	510
1937	301	63	17	130	87	12	21	18	63	69	22	9.0	301
1938	52	16	76	12	17	36	191	5.8	2.6	3.4	48	65	191
1939	76	183	52	16	36	28	38	306	4.7	19	5.4	52	306
1940	58	75	27	74	309	20	48	479	26	4.5	165	26	479
1941	39	15	30	48	6.2	80	51	4.3	9.0	1.74	1.87	6.5	80
1942	9.7	131	186	5.3	56	53	41	23	17	65	11	35	186
1943	206	115	120	127	15	47	72	17	7.1	2.7	9.0	24	206
1944	98	112	197	156	34	4.8	90	18	159	60	87	49	197
1945	57	127	19	10	160	4.3	21	3.1	445	17	41	121	445

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of year
1928										3.8	3.8	3.4	
1929	3.4	3.4	6.1	4.6	3.9	2.9	3.8	3.4	2.7	3.4	4.0	6.5	2.7
1930	6.5	5.9	5.2	3.9	2.8	2.4	1.68	1.48	1.42	1.74	1.94	1.74	1.42
1931	3.6	3.2	3.4	4.3	3.8	2.3	2.2	2.3	2.3	2.1	2.3	2.4	2.1
1932	3.4	4.3	3.8	3.9	2.6	2.2	1.94	.97	.97	1.29	3.6	3.6	.97
1933	5.6	5.6	4.7	3.9	2.6	2.1	1.87	2.2	1.94	1.62	1.74	1.87	1.62
1934	2.1	2.3	3.4	4.1	2.6	2.3	2.4	1.68	1.81	2.6	2.5	3.2	1.68
1935	3.9	4.4	4.6	5.7	5.2	2.8	2.6	1.87	1.87	2.2	2.3	3.0	1.87
1936	3.4	5.5	5.4	5.3	2.6	2.1	2.2	2.1	2.0	3.0	3.0	3.2	2.0
1937	9.0	7.1	5.9	4.8	4.1	3.2	2.6	2.3	2.6	2.9	3.5	3.6	2.3
1938	4.8	4.3	4.3	3.0	2.5	2.3	2.5	2.1	.162	1.62	1.81	2.8	1.62
1939	3.9	6.1	4.8	4.5	2.8	2.1	2.1	2.3	2.3	2.3	2.6	2.7	2.1
1940	3.1	3.9	4.7	4.6	3.1	3.0	2.8	2.8	3.0	2.7	3.0	3.6	2.7
1941	4.6	3.9	3.7	3.7	2.1	2.1	1.94	1.42	1.03	1.03	1.29	1.55	1.03
1942	1.68	2.3	3.9	2.8	2.3	2.3	2.1	1.94	1.55	1.94	2.5	3.9	1.55
1943	3.4	5.0	4.7	4.8	3.4	2.9	3.2	1.81	1.87	1.87	2.2	2.1	1.81
1944	3.3	3.2	4.7	5.8	3.3	2.2	2.1	1.68	1.81	2.7	2.9	4.1	1.68
1945	4.3	3.9	4.7	3.6	3.4	2.5	2.0	1.68	1.62	3.0	3.0	4.5	1.62

East Fork Deep River near High Point, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Jan. 7		4.4	7.1	13	16	15	4.7	16	72	68
14		4.3	17	7.8	43	28	3.9	11	23	12
21		3.7	29	7.8	4.3	7.8	2.8	4.9	87	83
28		3.8	14	4.2	3.9	11	2.8	11	7.8	17
Feb. 4		3.5	26	3.5	19	7.1	3.8	5.0	17	22
11		14	15	3.4	6.2	18	2.9	5.6	16	16
18		12	13	5.0	14	30	3.0	21	76	8.4
25		16	7.1	4.7	9.0	25	12	5.8	10	20
Mar. 4		118	5.9	4.6	4.5	6.5	153	6.0	7.1	11
11		41	13	5.2	65	6.0	8.4	10	9.7	7.8
18		9.0	6.1	3.6	4.9	7.1	3.7	32	28	9.7
25		17	8.4	11	27	28	9.7	17	10	8.4
Apr. 1		9.0	5.6	21	16	5.8	26	52	34	6.2
8		5.8	13	40	6.5	5.1	6.3	19	115	14
15		22	5.9	7.1	7.8	17	30	9.7	29	6.5
22		36	5.2	13	4.3	16	12	26	7.1	5.4
29		14	4.1	7.1	6.0	4.9	4.5	8.4	6.2	31
May 6		9.0	5.7	13	6.3	5.6	3.7	5.6	4.9	9.0
13		14	4.0	21	5.0	5.9	3.1	27	4.8	5.6
20		6.5	10	6.1	3.2	3.7	7.8	12	3.6	21
27		5.0	3.4	24	3.7	2.9	3.0	17	2.9	5.5
June 3		5.6	9.0	4.1	2.7	3.2	15	6.2	2.6	4.4
10		10	9.7	3.1	2.3	3.3	62	4.5	2.9	5.6
17		4.5	3.7	2.9	36	2.5	4.7	4.2	4.2	3.9
24		10	3.1	4.6	3.7	2.1	3.2	3.3	7.1	4.8
July 1		25	2.6	2.5	4.0	4.4	2.6	2.9	3.6	3.6
8		5.7	3.0	7.8	3.8	2.0	18	2.8	5.1	6.5
15		23	2.1	3.1	5.9	4.5	13	5.7	11	3.2
22		5.7	3.0	2.3	2.5	2.1	3.1	4.0	3.7	3.6
29		8.4	3.4	8.4	3.4	6.1	9.0	5.5	6.5	3.2
Aug. 5	2.2	6.1	2.2	8.4	4.3	18	4.0	2.9	24	2.7
12	17	8.4	3.7	14	3.9	2.7	2.1	2.7	12	5.2
19	25	13	2.4	7.8	2.0	61	2.5	2.3	3.1	3.5
26	7.1	6.5	1.74	34	1.48	3.4	3.3	2.2	2.5	7.1
Sept. 2	7.8	3.9	1.55	3.9	3.5	7.8	2.1	2.0	2.8	4.3
9	40	3.7	1.81	3.5	1.62	3.2	12	16	3.1	13
16	5.4	3.3	1.81	2.4	1.03	2.6	53	2.8	2.7	3.2
23	113	3.1	2.1	2.4	4.0	2.4	9.0	2.8	2.2	2.8
30	11	3.3	1.55	2.4	2.0	2.1	11	2.8	32	3.0
Oct. 7	6.1	118	1.87	2.2	3.2	1.81	4.7	2.3	5.6	7.8
14	4.3	4.3	1.87	2.3	1.94	1.68	3.6	2.3	10	3.9
21	4.1	3.7	1.93	2.3	97	1.81	3.0	2.3	14	6.2
28	5.6	6.0	2.1	2.1	3.5	1.81	2.8	2.3	3.7	16
Nov. 4	4.1	11	2.8	2.3	9.0	1.81	2.9	2.8	3.3	4.3
11	3.9	5.7	2.2	2.5	14	2.0	2.8	6.4	3.4	3.6
18	3.9	23	9.0	2.4	4.0	2.0	2.6	14	5.6	7.8
25	4.0	10	2.6	2.4	8.4	1.94	3.6	3.0	3.5	3.9
Dec. 2	4.0	25	2.6	2.5	15	1.94	32	4.3	3.5	6.3
9	4.2	19	25	4.4	3.9	2.1	5.6	3.3	9.7	4.5
16	3.9	7.1	3.0	3.4	35	2.0	3.6	6.3	13	3.9
23	3.6	9.0	3.7	9.7	19	3.0	7.1	3.6	15	4.3
31	3.5	12	14	5.8	70	2.6	7.1	3.3	25	6.0
Maximum		118	29	40	97	61	153	52	115	83
Minimum		3.1	1.55	2.1	1.03	1.68	2.1	2.0	2.2	2.7



East Fork Deep River near High Point, N. C.

Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1938	1939	1940	1941	1942	1943	1944	1945		
Jan. 7	17	7.1	3.6	14	2.7	4.5	18	19		
14	9.0	7.1	12	5.4	2.0	4.1	3.9	10		
21	5.3	6.0	7.1	13	3.7	4.2	22	7.1		
28	7.1	7.8	3.6	6.4	2.3	25	4.1	4.9		
Feb. 4	6.3	23	4.1	4.7	3.3	16	3.4	4.3		
11	4.8	3.7	32	4.2	5.6	39	14	4.8		
18	4.5	3.3	9.0	6.5	2.6	8.4	42	50		
25	7.1	7.1	15	4.1	4.7	5.9	10	32		
Mar. 4	7.8	65	7.1	3.8	8.4	5.0	6.5	9.7		
11	18	13	5.5	12	7.1	26	17	10		
18	6.5	11	12	5.2	5.5	17	23	5.6		
25	4.8	6.2	5.4	5.7	5.9	22	32	7.8		
Apr. 1	4.3	8.4	6.5	10	10	7.1	48	5.3		
8	5.4	7.1	16	17	4.1	5.0	7.8	4.7		
15	5.6	5.0	9.0	5.9	4.0	7.8	54	4.0		
22	4.3	6.3	10	4.3	3.2	26	16	3.9		
29	3.4	5.7	6.5	7.8	2.9	6.3	14	6.5		
May 6	3.0	10	4.4	3.6	2.7	4.6	9.7	4.0		
13	2.7	5.0	4.0	3.7	2.5	4.4	6.2	3.6		
20	3.1	3.7	15	2.7	3.4	4.4	4.4	14		
27	7.8	3.2	7.1	2.2	17	6.3	4.1	38		
June 3	3.9	8.4	68	8.4	3.4	3.6	3.4	5.7		
10	3.0	7.8	6.3	3.0	12	5.7	3.2	4.0		
17	2.6	3.0	3.7	14	7.8	6.5	3.2	3.2		
24	8.4	2.4	7.1	2.4	3.3	14	2.6	2.8		
July 1	8.4	9.7	4.5	3.4	3.0	8.4	2.4	2.6		
8	15	3.0	12	8.4	9.7	7.1	2.5	2.8		
15	4.1	2.5	6.5	4.1	12	17	19	5.2		
22	5.8	10	10	17	2.7	6.5	3.6	2.5		
29	43	2.8	3.4	3.4	2.6	5.9	3.3	2.4		
Aug. 5	4.4	3.7	5.2	2.1	2.5	3.1	5.2	2.3		
12	3.0	10	3.2	1.94	7.8	2.6	2.5	2.4		
19	2.8	60	87	1.62	9.7	2.3	1.94	2.4		
26	2.1	40	4.4	2.1	3.1	2.1	4.3	2.4		
Sept. 2	2.6	15	19	1.42	2.2	4.5	2.4	2.1		
9	1.81	3.5	4.9	2.7	5.7	2.8	1.87	2.5		
16	1.74	2.8	7.8	1.36	2.1	1.94	3.0	18		
23	1.81	2.5	3.2	1.16	1.68	2.6	2.6	116		
30	1.87	2.4	3.2	1.48	2.3	2.1	32	3.3		
Oct. 7	1.81	5.3	2.8	2.7	2.0	1.94	4.6	5.6		
14	1.68	2.8	2.9	1.16	2.8	1.94	3.0	3.5		
21	1.68	2.6	2.9	1.16	2.2	2.2	12	3.2		
28	2.1	2.5	2.8	1.23	14	2.3	4.2	3.2		
Nov. 4	1.87	2.8	5.8	1.36	3.2	2.3	3.3	3.0		
11	2.4	2.9	3.0	1.42	2.9	3.4	3.2	3.0		
18	2.0	2.6	47	1.55	2.6	2.3	3.0	3.2		
25	19	3.6	4.7	1.68	4.4	2.2	3.4	12		
Dec. 2	3.4	2.9	4.7	1.55	7.1	2.2	28	9.0		
9	11	2.8	3.9	2.8	13	2.6	8.4	30		
16	4.5	3.0	7.8	2.4	5.5	2.3	15	5.7		
23	3.1	3.7	6.2	2.1	4.8	2.4	4.7	4.8		
31	17	12	12	2.1	10	7.8	5.4	64		
Maximum	43	65	87	17	17	42	54	116		
Minimum	1.68	2.4	2.8	1.16	1.68	1.94	1.87	2.1		

West Fork Deep River near High Point, N. C.

Location.- Water-stage recorder and modified Parshall flume, lat. 36°00'15", long. 79°58'40", a quarter of a mile upstream from State highway bridge, at head of High Point Reservoir, about 2 miles northwest of Jamestown, and  $3\frac{1}{2}$  miles northeast of High Point, Guilford County.

Drainage area.- 32.1 square miles.

Records available.- June 1923 to September 1926, July 1928 to date.

Average discharge.- 19 years, 20.3 million gallons per day.

Extremes.- Maximum discharge, 1,860 million gallons per day, Jan. 19, 1936 (gage height, 13.84 feet); minimum discharge, 0.19 million gallons per day, Sept. 1, 1932.

Remarks.- Occasional marked diurnal fluctuation caused by gristmill 4 miles above station.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1924	25.7	25.3	25.5	37.7	30.9	14.1	33.0	20.5	38.1	11.6	11.0	29.1	25.2
1925	73.0	48.1	24.7	11.0	22.6	7.88	3.75	15.9	5.04	9.30	8.40	12.5	20.2
1926	48.6	48.6	24.9	19.6	7.17	5.60	15.2	7.30	2.86				
1927													
1928								40.2	66.5	11.6	9.63	8.59	
1929	11.2	60.0	49.5	36.0	16.6	17.2	15.0	13.8	5.88	48.6	26.2	22.2	26.6
1930	22.2	26.6	14.9	13.6	16.1	15.4	4.13	3.55	3.81	2.74	7.95	25.3	12.9
1931	16.9	8.14	19.1	41.2	37.7	6.24	16.2	32.4	4.23	2.28	3.33	11.2	16.7
1932	32.0	21.4	43.9	12.7	9.56	13.0	5.14	2.47	1.99	33.3	20.0	53.7	20.9
1933	26.7	31.1	20.2	19.6	9.95	5.72	5.69	28.2	3.89	2.52	3.86	5.61	13.5
1934	7.11	30.5	43.9	33.0	12.5	14.3	29.2	5.68	34.6	6.98	9.88	19.9	20.5
1935	22.1	20.3	43.0	42.5	23.3	8.46	13.8	3.57	6.32	3.45	14.7	7.95	17.4
1936	101	61.6	43.4	78.2	7.30	6.52	17.7	10.5	18.3	28.8	7.82	31.8	34.3
1937	98.8	29.7	19.1	34.4	19.0	10.2	11.3	13.2	13.0	17.2	12.1	11.4	24.2
1938	21.4	13.2	20.0	11.0	15.2	15.7	41.5	6.29	3.55	3.49	20.2	22.9	16.3
1939	20.8	66.5	30.9	15.2	11.6	9.04	13.0	56.4	5.29	5.35	6.38	11.4	20.7
1940	14.0	30.4	16.0	19.6	46.1	11.0	13.6	50.7	9.37	4.74	30.9	16.5	21.9
1941	19.6	10.1	21.3	18.9	6.21	15.5	30.9	3.58	2.55	1.96	2.75	5.20	11.6
1942	6.05	25.5	49.9	7.24	13.6	30.9	15.6	16.3	5.34	10.9	7.17	20.3	17.4
1943	44.0	37.3	40.7	27.6	12.0	12.7	20.7	6.52	4.31	3.66	4.86	8.59	18.5
1944	27.9	43.6	68.5	55.4	10.6	4.48	16.0	4.19	21.4	11.5	18.5	17.8	24.9
1945	21.8	49.5	17.2	9.82	15.2	5.67	10.0	3.60	67.8	7.30	14.1	55.7	22.9



## West Fork Deep River near High Point, N. C.

## Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1924	172	224	101	143	226	180	226	401	490	125	77	242	490
1925	317	562	158	23	180	34	28	214	40	112	16	85	562
1926	572	242	98	92	11	21	233	43	3.9				
1927													
1928								344	685	21	11	14	
1929	21	620	421	297	99	71	43	72	12	616	98	160	620
1930	155	142	51	56	112	158	19	19	8.4	4.2	58	129	158
1931	98	16	120	189	255	13	111	243	26	3.9	4.2	65	255
1932	226	78	486	39	33	126	34	11	7.8	724	107	236	724
1933	173	112	178	152	27	8.4	39	157	8.4	3.8	5.6	17	178
1934	16	450	265	339	94	126	231	18	427	15	83	234	450
1935	176	107	266	332	108	74	85	8.4	26	9.7	175	26	332
1936	982	489	281	659	12	21	191	96	368	237	23	227	982
1937	611	103	34	340	120	32	70	58	169	182	43	23	611
1938	110	43	173	32	165	94	276	15	7.8	8.4	284	124	284
1939	114	308	136	31	74	34	132	659	9.7	25	16	97	659
1940	107	152	54	119	788	39	92	846	37	8.4	300	54	846
1941	62	30	180	112	13	205	168	5.5	8.4	4.5	3.6	14	205
1942	15	388	665	13	125	257	92	70	20	143	25	81	665
1943	412	373	252	301	48	77	172	83	18	6.4	12	56	412
1944	205	213	549	549	41	6.5	229	12	388	74	132	78	549
1945	125	194	43	22	120	13	72	6.4	859	28	105	253	859

## Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1924	9.7	5.4	11	9.7	5.4	3.0	5.4	3.0	4.2	5.2	6.5	7.8	3.0
1925	12	9.7	8.4	5.2	5.8	3.2	1.29	1.29	1.94	2.6	6.5	6.5	1.29
1926	8.4	10	10	9.0	4.5	2.6	2.6	2.6	1.94				
1927													
1928								3.6	8.4	9.0	8.4	6.5	
1929	8.4	9.0	16	10	7.1	4.9	4.5	5.1	4.3	4.9	5.1	7.1	4.3
1930	5.4	11	10	9.0	3.2	3.4	1.42	1.42	1.16	2.3	2.9	3.3	1.16
1931	6.5	5.6	7.8	10	10	3.2	2.5	2.8	2.0	1.74	2.6	3.7	1.74
1932	7.8	11	11	7.8	4.5	3.1	1.67	.58	.39	1.62	5.8	5.0	.39
1933	12	12	12	9.0	5.2	3.0	2.4	2.4	1.62	1.94	2.6	4.1	1.62
1934	5.2	4.5	7.8	7.1	4.9	3.2	2.8	3.4	3.4	4.4	5.0	7.1	2.8
1935	9.0	8.4	9.7	12	9.0	3.1	2.8	1.94	2.6	2.8	3.6	4.8	1.94
1936	6.4	9.7	12	12	4.1	3.7	3.0	3.4	3.2	6.2	6.2	6.4	3.0
1937	20	15	13	9.7	7.1	4.9	4.3	3.1	3.8	4.5	7.8	7.8	3.1
1938	10	9.0	9.0	6.2	4.9	4.1	5.2	3.7	2.6	2.1	3.3	7.8	2.1
1939	10	14	11	9.7	6.3	2.5	2.8	4.6	3.2	3.4	4.6	5.3	2.5
1940	5.3	9.0	9.0	9.0	5.4	5.0	4.5	3.9	4.4	4.3	5.2	6.5	3.9
1941	10	7.8	7.8	7.8	3.8	4.5	4.7	2.1	1.55	1.49	2.1	3.0	1.49
1942	3.2	5.0	8.4	5.4	4.3	3.6	3.2	2.1	2.1	2.7	5.2	7.1	2.1
1943	8.4	9.7	10	11	7.1	4.6	6.5	2.3	2.6	2.4	3.3	3.3	2.3
1944	7.1	7.1	11	13	5.4	2.8	2.8	1.94	2.0	4.8	6.1	9.0	1.94
1945	8.4	7.1	10	7.8	6.5	3.3	2.9	2.1	2.0	5.7	5.6	9.7	2.0

West Fork Deep River near High Point, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935
Jan. 7	30	70	11			11	8.4	31	30	21	9.0	43
14	19	93	13			12	21	16	79	56	8.4	21
21	44	132	118			10	46	17	11	16	5.7	11
28	16	21	19			12	16	8.4	9.0	19	5.2	19
Feb. 4	9.0	20	123			10	45	6.5	36	16	8.4	9.7
11	7.1	114	20			29	29	6.5	15	28	6.1	11
18	8.4	48	17			25	23	9.7	27	39	7.1	47
25	62	13	78			36	12	9.7	17	40	17	12
Mar. 4	40	9.7	21			181	11	9.0	12	16	165	12
11	30	24	28			94	24	12	99	15	24	19
18	24	37	45			26	12	9.0	13	14	8.4	85
25	20	31	13			45	15	22	50	43	17	21
Apr. 1	17	13	19			20	11	57	32	12	72	107
8	40	9.0	14			13	23	93	15	11	15	38
15	43	8.4	36			27	11	19	12	34	85	20
22	34	12	17			72	12	27	9.0	25	26	56
29	13	14	13			36	9.7	16	12	11	8.4	19
May 6	49	12	9.0			22	9.0	27	12	12	6.5	12
13	50	55	7.8			28	9.0	54	14	12	5.4	40
20	19	26	7.1			13	19	17	7.1	9.7	17	16
27	36	7.8	5.8			9.7	4.8	63	7.1	6.1	5.9	32
June 3	16	6.5	5.2			9.7	34	12	5.6	7.8	25	19
10	7.1	5.2	5.2			18	42	7.8	39	6.1	33	9.0
17	16	11	3.2			8.4	9.0	6.2	6.5	6.2	7.8	6.2
24	6.0	5.2	9.0			9.0	6.5	4.7	5.6	3.7	4.5	4.8
July 1	59	9.7	5.2			34	5.2	3.6	7.1	6.1	3.6	3.7
8	23	9.0	3.2			9.7	3.7	37	5.9	3.7	18	3.2
15	65	3.2	3.2			22	2.3	7.8	9.0	6.5	75	34
22	17	1.94	3.2			11	6.5	4.5	3.3	4.3	6.4	11
29	9.0	1.94	55			13	4.2	21	3.4	9.0	13	11
Aug. 5	67	32	10		4.6	15	2.7	13	4.2	14	22	4.0
12	9.7	12	16		77	18	4.0	28	4.3	3.2	4.8	4.0
19	7.8	17	3.2		65	14	5.7	34	1.62	91	5.2	2.9
26	5.4	7.8	3.2		28	19	3.0	57	1.16	7.8	6.2	4.0
Sept. 2	4.0	3.9	3.2		16	6.1	1.74	15	.71	10	4.9	3.0
9	23	2.6	3.9		83	7.1	3.7	7.8	2.1	5.6	16	15
16	7.1	10	3.2		11	4.9	4.0	2.8	1.03	4.5	88	4.6
23	30	4.5	2.6		160	5.9	5.0	2.4	2.5	3.1	20	3.5
30	102	3.2	1.93		20	5.6	3.2	2.1	2.8	2.0	23	3.6
Oct. 7	27	2.6			14	182	2.3	2.1	5.7	2.3	10	3.2
14	6.5	4.5			9.7	9.0	2.4	2.2	2.6	2.1	7.1	3.2
21	6.5	6.5			9.7	7.8	2.9	2.1	128	2.7	5.8	3.2
28	7.8	25			13	14	2.7	2.3	9.0	2.9	5.3	3.1
Nov. 4	7.1	8.4			10	25	5.4	3.0	16	3.4	5.8	4.7
11	7.1	8.4			9.7	10	3.8	3.2	23	3.4	5.7	12
18	7.8	9.7			9.7	47	18	3.4	11	4.2	5.4	36
25	23	7.8			9.7	15	5.6	3.6	15	4.4	6.5	6.3
Dec. 2	7.8	7.1			9.7	41	3.7	3.6	25	4.1	60	9.0
9	49	7.1			8.4	31	3.5	7.8	6.2	5.7	13	6.5
16	14	6.5			9.7	7.8	6.2	7.1	54	4.6	7.8	12
23	9.0	26			9.0	13	23	18	37	7.1	14	7.1
31	48	12			7.1	19	41	14	121	5.4	12	64
Maximum	102	132				182	46	93	128	91	165	107
Minimum	4.0	1.94				4.9	1.74	2.1	0.71	2.0	3.6	2.9



West Fork Deep River near High Point, N. C.

Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Jan. 7	186	171	37	18	7.8	30	6.3	12	47	43
14	58	25	21	18	24	12	4.7	10	12	24
21	180	180	12	15	19	25	7.8	9.3	52	15
28	16	34	17	19	7.1	14	5.3	50	10	11
Feb. 4	33	46	15	46	9.0	10	6.5	43	7.8	8.4
11	39	32	11	85	59	8.4	11	98	30	11
18	156	19	10	61	17	14	69	21	105	98
25	23	41	18	17	36	8.4	13	13	28	74
Mar. 4	16	24	17	127	16	8.4	18	10	17	23
11	19	17	42	31	12	26	159	64	38	23
18	64	20	16	27	26	12	13	43	54	13
25	26	19	11	14	12	12	14	53	76	17
Apr. 1	78	14	9.7	21	15	45	25	17	132	11
8	234	30	14	19	26	37	9.0	12	18	9.7
15	65	15	14	12	21	13	8.4	16	125	8.4
22	16	12	10	16	19	9.0	6.1	72	39	8.4
29	14	85	7.1	13	14	16	5.6	15	49	14
May 6	10	19	5.9	22	9.0	8.4	5.3	10	17	8.4
13	8.4	12	5.2	11	8.4	7.8	4.5	9.0	13	7.1
20	7.1	42	6.5	8.4	16	5.7	6.5	11	7.8	23
27	5.6	11	45	7.1	25	4.5	41	19	7.8	24
June 3	4.7	8.4	9.7	13	154	13	5.6	8.4	5.7	9.7
10	5.3	13	6.5	9.0	11	6.5	78	12	5.3	6.3
17	7.8	6.5	4.6	5.7	6.5	37	39	12	4.5	5.2
24	8.4	9.7	14	4.7	14	5.6	9.0	17	4.5	6.5
July 1	5.6	13	39	14	7.8	8.4	5.2	10	3.1	3.8
8	9.0	28	59	6.3	9.7	16	21	12	4.5	5.6
15	16	6.5	8.4	5.4	17	39	21	39	50	12
22	5.1	6.5	25	33	23	68	19	16	7.8	6.3
29	5.4	5.5	87	7.1	5.4	11	4.9	21	6.3	18
Aug. 5	47	4.5	9.7	5.9	9.7	5.0	9.0	6.3	6.4	4.7
12	26	17	6.1	12	4.8	4.1	24	4.5	3.9	4.1
19	6.5	6.5	7.1	180	186	3.3	28	3.6	2.6	3.7
26	4.1	15	4.1	34	8.4	3.5	7.8	2.6	3.9	3.4
Sept. 2	4.8	19	5.3	23	25	2.3	5.1	16	3.9	2.9
9	7.8	36	3.7	7.1	9.7	4.3	8.4	5.6	2.4	4.3
16	8.4	7.1	3.5	4.9	15	2.1	4.3	3.3	5.7	40
23	5.6	4.9	3.4	4.0	5.3	1.68	2.8	5.0	5.5	238
30	56	5.9	3.6	4.3	5.0	2.3	5.9	3.6	77	7.1
Oct. 7	43	10	3.4	8.4	4.3	2.4	3.6	3.0	13	10
14	30	7.8	3.2	4.7	4.6	1.62	5.2	2.8	5.7	7.1
21	44	15	3.0	4.1	4.7	1.62	4.8	4.3	20	6.0
28	7.8	37	4.5	4.0	4.7	2.1	31	4.1	9.7	6.5
Nov. 4	6.5	12	3.5	5.4	10	2.5	7.8	4.4	6.5	6.0
11	7.1	8.4	5.9	6.3	5.7	2.4	6.3	6.3	6.5	5.6
18	11	17	4.3	4.8	101	2.5	5.6	4.6	6.3	6.5
25	7.1	9.0	66	9.0	10	3.2	9.7	4.5	7.1	28
Dec. 2	7.8	16	10	5.9	10	3.1	14	4.4	61	20
9	22	11	32	5.7	7.8	6.2	32	5.3	17	59
16	29	9.0	13	6.3	16	5.4	13	4.3	32	13
23	35	10	8.4	8.4	16	4.5	10	4.6	10	10
31	46	15	4.0	25	27	5.3	23	19	12	141
Maximum	234	180	87	180	186	68	159	98	132	238
Minimum	4.1	4.5	3.0	4.0	4.3	1.62	2.8	2.6	2.4	2.9

Haw River near Benaja, N. C.

Location.— Water-stage recorder, lat. 36°14'55", long. 79°33'45", at site of old High Rock Mill, 500 feet upstream from county road crossing, half a mile upstream from county line, and 6 miles east of Benaja, Rockingham County.

Drainage area.— 168 square miles.

Records available.— October 1928 to date.

Average discharge.— 17 years, 109 million gallons per day.

Extremes.— Maximum discharge, 6,520 million gallons per day, Sept. 18, 1945 (gage height, 18.10 feet) from high-water mark in gage shelter; minimum discharge, 4.1 million gallons per day, Sept. 1, 1932, (gage height, 0.73 feet).

Remarks.— Records good.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1928										58.9	50.6	49.0	
1929	57.7	153	261	155	85.9	229	134	126	50.1	309	141	131	153
1930	149	147	97.5	81.4	49.1	68.5	26.1	22.2	19.4	16.4	43.5	82.0	66.5
1931	90.4	53.6	74.3	168	139	30.7	62.1	203	31.0	20.2	23.2	71.1	80.8
1932	189	109	194	96.9	52.6	65.2	20.0	13.4	16.1	149	120	220	104
1933	154	151	105	99.5	79.5	25.7	20.7	46.1	57.5	18.9	25.5	38.5	67.8
1934	41.9	71.7	259	242	122	112	76.9	61.3	161	62.3	58.1	166	120
1935	152	121	194	245	96.9	46.1	68.5	20.7	61.0	25.7	85.3	57.9	97.5
1936	452	297	253	313	57.0	115	95.0	87.9	28.4	152	58.5	160	172
1937	495	180	116	179	136	69.8	77.5	148	116	316	114	87.9	170
1938	127	97.5	106	87.2	55.4	78.2	158	56.4	27.1	29.5	118	113	87.9
1939	101	251	213	117	124	71.7	112	260	40.8	37.9	57.4	74.3	121
1940	99.5	193	110	110	64.0	114	55.1	365	59.6	33.3	166	85.9	121
1941	107	73.6	96.9	110	42.2	56.7	127	32.6	51.5	15.2	22.2	42.6	64.6
1942	47.7	117	175	52.1	106	101	33.2	81.4	31.7	63.8	47.8	91.1	78.8
1943	118	208	196	169	65.9	88.5	93.7	28.0	35.9	25.6	35.5	51.4	92.4
1944	127	188	260	295	92.4	45.7	59.8	29.8	76.9	183	82.0	128	130
1945	128	201	108	76.9	83.3	41.3	65.9	28.0	513	554	78.2	241	134



## Haw River near Benaja, N. C.

## Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1928										129	70	67	
1929	90	1130	1350	652	207	1270	304	258	91	3000	280	323	3000
1930	377	328	185	155	94	296	72	70	57	34	103	185	377
1931	207	76	164	548	426	57	404	937	82	38	28	200	937
1932	982	207	1040	207	100	235	44	56	65	1020	178	736	1040
1933	320	235	249	172	274	78	50	120	328	39	34	82	328
1934	78	460	956	995	452	336	338	214	539	169	176	930	995
1935	284	276	530	678	151	80	153	34	342	56	231	123	678
1936	1390	1250	1240	1190	87	698	775	517	166	637	105	517	1390
1937	1400	322	141	659	447	158	306	601	544	1970	207	112	1970
1938	231	165	231	160	118	252	762	171	41	59	499	244	762
1939	236	490	775	187	607	140	589	975	89	75	97	208	975
1940	284	420	191	231	231	326	161	2580	187	55	911	211	2580
1941	171	155	183	238	105	123	402	194	284	24	28	81	402
1942	90	469	885	92	441	267	78	260	101	249	83	165	89
1943	308	717	450	891	118	249	266	102	107	37	57	154	891
1944	340	627	609	1090	258	110	149	65	1050	1490	403	349	1490
1945	233	388	201	127	241	72	236	78	4940	94	194	698	4940

## Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1928										41	43	39	
1929	43	39	83	56	44	39	45	35	35	50	70	78	35
1930	79	81	72	56	28	25	8.4	8.4	6.5	9.7	18	30	6.5
1931	50	41	47	57	47	18	14	32	17	15	17	28	14
1932	57	62	52	54	32	21	9.7	4.8	4.5	15	63	50	4.5
1933	84	84	70	61	29	13	9.7	17	13	13	18	25	9.7
1934	22	26	49	78	26	23	23	17	33	33	37	59	17
1935	80	72	79	90	57	24	20	13	14	20	30	36	13
1936	39	78	87	87	33	28	25	23	16	48	45	52	16
1937	128	109	90	79	63	37	35	30	35	44	76	72	30
1938	85	78	69	49	31	26	32	25	20	19	33	60	19
1939	76	97	87	78	48	30	23	44	26	26	42	48	23
1940	52	71	74	68	36	35	27	27	27	25	41	52	25
1941	67	51	57	53	19	18	17	14	13	11	16	23	11
1942	28	41	56	30	19	23	13	13	14	19	36	48	13
1943	53	64	62	63	49	32	41	11	19	18	32	26	11
1944	52	47	83	87	43	22	18	15	10	43	48	74	10
1945	68	54	77	56	47	25	28	17	16	45	50	78	16

## Haw River near Benaja. N. C.

## Mean Weekly Discharge in Million Gallons per day

Week Ending	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Jan. 7		61	109	116	125	198	48	163	519	898
14		68	98	110	518	212	48	173	551	244
21		56	280	89	90	121	43	91	623	609
28		50	130	63	63	106	34	201	276	328
Feb. 4		43	134	48	121	95	45	91	90	268
11		94	228	49	132	136	37	82	213	168
18		101	138	56	113	194	37	187	659	154
25		117	95	63	89	180	43	127	236	182
Mar. 4		724	82	58	61	90	408	90	109	136
11		393	125	68	497	85	434	101	105	113
18		115	87	52	91	78	77	320	346	114
25		109	104	72	122	179	123	118	394	114
Apr. 1		103	80	123	140	88	275	354	247	107
8		72	107	311	136	80	159	395	618	154
15		68	92	173	105	119	534	182	453	137
22		362	74	98	64	127	193	160	124	87
29		116	60	104	78	83	101	219	105	344
May 6		145	50	70	70	79	68	85	78	137
13		99	41	167	56	103	35	85	67	109
20		55	64	84	49	54	229	117	57	247
27		71	36	269	37	43	114	122	43	77
June 3		76	53	55	42	103	206	56	34	99
10		95	105	33	23	28	235	53	35	96
17		96	103	30	155	24	88	59	83	65
24		94	43	28	59	17	36	43	294	66
July 1		711	28	21	36	21	28	26	72	42
8		109	23	23	23	14	30	40	54	68
15		154	14	74	16	23	105	76	38	110
22		202	41	26	25	22	28	98	167	84
29		68	27	130	16	22	101	73	116	63
Aug. 5		70	20	129	19	50	134	32	105	39
12		129	44	125	26	33	38	23	220	96
19		151	20	171	9.0	62	25	16	49	121
26		130	14	387	7.1	32	39	23	32	141
Sept. 2		110	9.0	125	5.4	45	121	16	29	345
9		61	15	44	27	167	134	143	26	243
16		41	20	25	6.5	34	172	61	28	83
23		45	29	22	13	21	298	27	20	43
30		49	17	23	21	14	72	25	41	51
Oct. 7	81	1120	11	19	32	24	116	24	329	691
14	48	89	13	18	24	16	64	22	83	172
21	47	56	19	25	492	17	42	23	173	167
28	63	80	17	19	92	18	39	25	66	217
Nov. 4	50	90	28	21	110	19	40	40	48	229
11	50	137	40	21	139	25	48	75	52	93
18	48	136	62	23	93	26	41	159	79	157
25	57	175	47	26	103	28	60	69	53	85
Dec. 2	52	127	33	26	114	25	306	65	56	101
9	49	221	99	47	58	37	257	47	90	85
16	50	96	68	65	149	32	65	83	236	78
23	50	98	70	65	150	50	96	60	189	82
31	43	120	101	114	523	52	76	38	154	103
Maximum		1120	280	387	523	212	534	395	659	898
Minimum		41	9.0	18	5.4	14	25	16	20	39



## Haw River near Benaja, N. C.

Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1938	1939	1940	1941	1942	1943	1944	1945		
Jan. 7	132	95	69	137	49	90	210	176		
14	177	92	91	83	34	64	75	166		
21	103	103	165	127	59	120	191	109		
28	109	92	84	93	48	123	63	85		
Feb. 4	99	172	87	68	52	262	50	65		
11	83	299	295	61	65	432	75	76		
18	84	304	143	103	136	151	285	264		
25	105	145	240	67	207	84	324	341		
Mar. 4	112	478	108	62	74	65	109	163		
11	125	171	118	120	401	275	222	150		
18	145	219	140	90	171	163	260	87		
25	85	138	90	68	70	278	310	91		
Apr. 1	70	105	94	140	98	130	369	87		
8	94	134	89	193	57	70	169	70		
15	118	106	169	100	67	92	503	60		
22	85	118	91	61	45	391	205	74		
29	61	105	96	89	37	151	304	104		
May 6	45	300	83	53	29	63	98	74		
13	34	93	62	55	25	57	145	54		
20	59	69	43	36	136	73	68	85		
27	70	78	45	25	254	69	87	64		
June 3	70	64	175	60	52	60	68	127		
10	69	81	76	49	159	92	48	49		
17	37	110	111	76	179	154	48	39		
24	84	48	129	34	44	63	42	40		
July 1	144	45	62	57	29	59	26	30		
8	155	52	59	50	41	54	21	50		
15	67	45	76	122	29	196	68	83		
22	67	186	58	270	25	85	94	112		
29	368	152	32	103	39	61	53	34		
Aug. 5	63	135	57	30	25	34	63	32		
12	108	136	47	17	88	21	36	22		
19	43	355	1300	20	172	21	20	40		
26	33	403	134	63	65	14	20	28		
Sept. 2	30	196	127	30	27	56	21	19		
9	25	52	96	158	50	45	12	38		
16	26	35	52	24	27	37	37	89		
23	33	32	34	15	17	35	74	1930		
30	25	30	32	20	34	27	203	144		
Oct. 7	34	52	30	17	25	21	526	61		
14	23	36	33	14	32	21	53	61		
21	23	32	32	14	50	27	80	47		
28	37	31	35	14	116	30	129	55		
Nov. 4	34	48	73	19	92	35	54	50		
11	50	57	52	20	43	43	52	52		
18	42	45	441	21	39	34	56	52		
25	306	74	111	25	51	33	60	109		
Dec. 2	110	52	70	25	61	32	244	138		
9	130	52	56	51	118	40	127	322		
16	109	50	63	48	101	34	174	114		
23	64	60	96	35	61	30	85	83		
31	154	134	130	41	88	100	80	440		
Maximum	368	478	1300	270	401	432	526	1930		
Minimum	23	30	30	14	17	14	12	19		

# Haw River at Haw River, N. C.

Location.- Water-stage recorder, lat. 36°05'35", long. 79°21'40", at town of Haw River, Alamance County, 400 feet downstream from Southern Railway bridge and 3 miles downstream from Stony Creek.

Drainage area.- 599 square miles.

Records available.- October 1928 to date.

Average discharge.- 17 years, 389 million gallons per day.

Extremes.- Maximum discharge, 23,900 million gallons per day, Sept. 18, 1945 (gage height, 31.10 feet) from high-water mark in gage shelter; minimum discharge, 1.9 (regulated) million gallons per day, Sept. 5, 1930 (gage height, 0.92 feet).

Remarks.- Large diurnal fluctuation and some regulation for short periods at low flow caused by power plants above station.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1928										195	145	151	
1929	173	833	1053	510	286	596	521	311	159	1047	487	488	538
1930	563	559	295	241	198	184	186	82.7	38.9	38.3	117	286	231
1931	322	176	235	685	419	121	249	762	91.7	38.5	51.8	193	280
1932	724	413	782	300	134	234	45.8	49.5	69.8	509	508	943	393
1933	548	583	316	331	289	100	65.2	188	113	36.3	47.2	76.2	222
1934	114	310	795	815	379	521	382	143	526	149	180	550	405
1935	462	368	720	1029	413	151	174	65.9	151	72.4	271	201	339
1936	1805	1070	1060	1414	166	336	279	229	80.1	446	143	576	633
1937	1923	644	380	716	359	237	240	578	417	563	306	232	550
1938	458	271	365	273	139	351	950	222	60.3	57.2	348	404	326
1939	341	1096	743	326	401	208	439	1074	163	97.5	151	232	436
1940	324	848	368	343	313	351	260	960	187	82.0	681	297	416
1941	378	247	363	458	111	267	423	86.6	136	31.6	40.2	95.0	220
1942	112	414	582	151	477	520	111	253	125	207	149	403	292
1943	685	762	751	575	208	388	553	87.2	127	49.1	105	182	370
1944	629	782	1122	1044	288	110	267	102	355	539	289	393	492
1945	419	879	355	237	271	84.6	181	78.8	1863	172	218	961	472



## Haw River at Haw River, N. C.

## Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1928											198	190	
1929	241	9110	6270	2280	575	3840	2550	749	360	9880	917	1770	9880
1930	2110	1850	724	652	1030	801	1610	358	94	78	315	956	2110
1931	1110	315	659	3280	1380	372	975	2840	213	79	102	426	3280
1932	4250	1200	5400	885	232	1140	80	541	545	4250	1540	2990	5400
1933	1440	1400	827	963	2070	313	134	609	517	69	76	161	2070
1934	215	2280	3120	6250	1830	2050	1830	370	3140	349	1020	4860	6250
1935	1540	969	4010	5380	1310	321	415	99	943	137	1620	801	5380
1936	6720	5190	5740	6850	352	2260	1680	736	593	2020	333	2020	6850
1937	6980	1470	563	4030	859	950	1020	2290	2770	2560	924	381	6980
1938	1940	494	1360	1090	392	1090	5490	1160	103	106	358	2610	5490
1939	1050	3620	3930	711	2650	685	3530	5170	659	250	245	969	5170
1940	1300	4410	1080	1020	2140	1360	1960	7300	531	141	5470	982	7300
1941	1010	685	891	2780	182	2270	1490	575	743	58	70	181	2780
1942	223	2710	2930	318	5720	2360	221	1080	843	917	547	1870	5720
1943	3710	5000	2910	3380	417	1350	4160	328	1050	107	504	801	5000
1944	2700	3680	2940	6850	982	256	1620	351	6520	4500	1820	1100	6850
1945	924	2900	840	605	769	160	840	359	20700	539	814	3230	20700

## Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1928										118	118	118	
1929	132	125	255	163	140	140	181	112	87	140	179	233	87
1930	205	253	176	141	98	72	29	26	3	22	31	88	3
1931	139	110	103	182	128	50	50	65	30	12	19	33	12
1932	151	207	161	145	60	45	24	13	13	34	174	148	13
1933	233	226	196	159	65	23	26	34	10	6.5	7.8	15	6.5
1934	34	58	141	136	45	37	74	28	76	64	62	121	28
1935	178	142	178	227	162	66	44	37	39	37	78	100	37
1936	110	194	252	211	53	65	37	17	14	112	62	106	14
1937	386	314	254	212	143	37	42	59	34	92	152	150	34
1938	224	203	176	109	56	73	107	44	19	16	28	99	16
1939	172	253	203	152	112	28	29	132	34	32	45	52	28
1940	125	253	200	183	88	70	52	36	27	33	64	105	27
1941	211	144	151	138	38	45	46	16	9.0	14	18	37	9.0
1942	50	75	157	57	30	31	23	25	18	18	47	119	18
1943	134	172	171	199	115	44	90	24	43	10	15	21	10
1944	150	105	241	280	103	41	22	25	19	32	81	200	19
1945	180	126	202	118	81	21	30	26	18	96	86	236	18

## Haw River at Haw River, N. C.

## Mean Weekly Discharge in Million Gallons per day

Week Ending	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
Jan. 7		171	348	480	468	572	147	678	2890	3450	575	273
14		200	335	358	2090	975	146	471	1590	640	672	275
21		162	1160	319	273	401	98	237	2810	2860	288	344
28		167	496	202	198	343	72	567	616	995	375	320
Feb. 4		141	659	158	562	280	139	211	340	1130	295	717
11		290	840	148	438	476	109	198	685	665	224	1430
18		410	466	191	433	840	87	678	2640	483	236	1160
25		516	291	211	320	730	125	374	645	672	298	448
Mar. 4		3620	258	182	214	291	1710	240	344	478	329	2240
11		1620	388	212	2170	248	969	363	391	377	554	608
18		436	276	164	286	234	190	1340	1780	388	478	645
25		685	320	227	383	543	402	342	1160	366	244	353
Apr. 1		408	217	445	631	252	1200	1780	1270	313	191	444
8		248	356	1620	370	229	422	1340	3770	599	303	477
15		207	253	486	372	460	2210	599	1520	412	439	267
22		1140	207	323	171	437	524	1030	351	242	222	304
29		450	167	354	224	242	183	634	291	1650	162	233
May 6		441	156	256	206	231	110	233	228	480	106	1140
13		342	160	538	132	279	77	372	191	324	96	241
20		180	364	221	142	147	614	548	193	574	122	174
27		245	140	769	81	134	333	607	105	212	203	183
June 3		222	142	222	103	598	963	183	81	240	170	205
10		303	296	117	55	107	1270	176	109	337	255	307
17		281	251	82	665	90	307	206	196	313	181	254
24		236	109	109	162	59	166	127	904	178	450	129
July 1		1770	83	101	85	93	120	81	213	91	620	98
8		399	69	99	59	54	147	130	182	391	795	135
15		950	67	335	41	57	724	189	96	278	495	174
22		585	547	101	46	60	140	243	347	199	279	762
29		218	103	487	32	78	317	166	283	151	2490	614
Aug. 5		215	74	366	36	169	510	83	608	183	300	431
12		380	176	592	140	141	153	78	456	358	500	559
19		292	66	1210	25	262	69	55	142	440	121	1930
26		325	53	1000	17	203	70	69	70	698	93	872
Sept. 2		271	34	320	20	106	189	52	79	1100	71	1300
9		157	14	136	167	302	511	340	59	1110	55	180
16		193	44	72	25	79	885	153	87	249	66	97
23		132	59	76	30	52	646	76	54	116	67	225
30		148	37	54	71	30	187	65	117	113	52	90
Oct. 7	291	3930	33	37	81	46	259	67	866	612	71	154
14	181	242	39	45	70	41	158	69	310	355	54	86
21	157	152	41	44	1730	30	117	64	569	685	45	76
28	167	226	32	37	308	34	89	66	165	530	65	72
Nov. 4	156	315	62	41	445	31	93	107	136	494	63	130
11	134	440	103	43	652	43	123	224	116	202	79	156
18	135	503	161	52	256	47	116	603	217	516	78	111
25	167	492	147	61	333	48	130	163	110	222	1070	184
Dec. 2	143	550	80	52	635	51	1470	182	112	260	269	140
9	145	820	331	116	187	61	557	125	342	213	412	118
16	154	284	200	172	833	63	161	380	969	187	340	154
23	158	406	152	211	616	103	362	185	612	200	140	147
31	147	459	484	295	2140	91	204	120	519	309	743	508
Maximum		3930	1160	1620	2170	975	2210	1780	3770	3450	2490	2240
Minimum		132	14	37	17	30	69	52	54	91	45	72



## Haw River at Haw River, N. C.

Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1940	1941	1942	1943	1944	1945					
Jan. 7	210	488	116	317	1070	630					
14	260	252	90	224	281	569					
21	551	497	127	1120	1140	339					
28	273	333	122	743	218	229					
Feb. 4	309	245	134	1070	186	182					
11	1690	202	247	1820	326	220					
18	501	331	711	467	1610	1540					
25	963	238	526	251	975	1390					
Mar. 4	365	183	275	185	348	523					
11	333	474	1410	1250	866	543					
18	537	313	409	659	1180	259					
25	261	232	254	950	1300	284					
Apr. 1	324	558	351	405	1610	270					
8	289	963	183	233	474	187					
15	574	366	210	304	2300	151					
22	253	208	115	1430	736	222					
29	277	320	84	426	730	389					
May 6	208	138	99	205	346	201					
13	181	148	76	173	468	143					
20	128	103	419	218	187	410					
27	352	71	1450	216	236	218					
June 3	924	202	165	196	156	314					
10	262	145	1240	460	103	98					
17	263	659	685	620	128	105					
24	488	116	153	377	121	61					
July 1	132	99	80	185	70	55					
8	456	236	164	190	50	80					
15	371	434	136	1620	386	218					
22	186	853	92	340	537	353					
29	91	306	59	227	136	116					
Aug. 5	134	87	66	122	249	65					
12	101	56	332	61	115	42					
19	3500	55	500	50	53	134					
26	335	154	193	34	61	89					
Sept. 2	280	82	76	193	54	54					
9	283	405	258	249	38	64					
16	252	73	78	107	124	297					
23	98	39	40	92	282	7240					
30	101	50	144	72	1070	364					
Oct. 7	86	39	56	47	1330	210					
14	85	30	92	39	147	205					
21	70	27	198	49	462	120					
28	81	28	425	59	390	167					
Nov. 4	202	36	248	71	129	132					
11	157	39	106	185	145	120					
18	2160	41	95	95	140	144					
25	286	44	202	74	161	396					
Dec. 2	203	47	226	72	988	320					
9	149	113	514	101	392	1200					
16	189	101	344	87	583	448					
23	322	76	229	65	224	332					
31	530	98	528	461	242	1890					
Maximum	3500	963	1450	1620	2300	7240					
Minimum	70	27	40	34	38	42					

# Haw River near Pittsboro, N. C.

Location.- Water-stage recorder, lat. 35°41'00", long. 79°05'40", 100 feet upstream from Robinsons Creek, 2 miles downstream from bridge on State Highway 90, and 5 miles east of Pittsboro, Chatham County. Datum of gage is 180.06 feet above mean sea level (levels by Corps of Engineers, U. S. Army).

Drainage area.- 1,310 square miles.

Records available.- November 1928 to date.

Average discharge.- 17 years, 835 million gallons per day.

Extremes.- Maximum discharge, 51,000 million gallons per day, Sept. 18-19, 1945 (gage height, 28.58 feet) from high-water mark in gage station; minimum discharge, 5.8 million gallons per day, Oct. 13, 1930 (regulated), (gage height 1.32 feet). Flood of August 1908 reached a stage of about 32.1 feet (discharge, 63,300 million gallons per day, from rating curve extended above 29,700 million gallons per day.

Remarks.- Large diurnal fluctuation and some regulation for short periods at low flow caused by power plants above station.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1928											271	260	
1929	271	1718	2810	1131	795	956	1105	645	269	2255	1163	1040	1176
1930	1150	1227	585	478	318	382	337	136	46.8	38.4	156	559	447
1931	665	317	501	1450	1079	245	460	1673	154	54.2	64.0	371	590
1932	1731	950	1667	665	283	814	116	106	84.0	827	1137	2177	882
1933	1195	1298	698	756	386	160	97.5	300	158	44.3	54.9	110	432
1934	174	525	1402	1796	626	1337	685	408	1460	333	437	1375	879
1935	1244	925	1616	2174	995	268	359	969	557	87.2	508	479	774
1936	4171	2667	2444	3212	284	744	682	526	156	897	266	1349	1447
1937	4126	1549	943	1579	643	424	441	1169	888	766	499	409	1120
1938	1039	523	787	711	290	910	1943	428	149	104	620	890	702
1939	883	2753	1958	901	959	407	747	2279	299	160	234	375	988
1940	607	1870	897	809	530	552	322	1527	279	85.9	1255	556	769
1941	789	548	881	1037	213	582	643	131	185	38.8	49.0	141	435
1942	162	802	1158	290	868	926	228	510	368	378	456	1119	605
1943	1658	1400	1513	1179	424	702	1324	187	311	81.4	159	293	766
1944	1252	1753	2455	1930	639	175	716	316	534	1548	667	818	1066
1945	851	1950	809	554	537	171	676	270	5020	390	351	1927	1114



Haw River near Pittsboro, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1928											305	349	
1929	349	1420	1460	6250	2050	6230	8200	3360	381	26500	3990	4630	26500
1930	4220	5430	1410	1370	1280	1530	4770	515	92	83	477	2830	5430
1931	2730	554	1410	7690	5230	814	1670	6140	355	134	119	1110	7690
1932	12900	2890	14100	2090	492	4450	348	562	409	6980	4200	8080	14100
1933	4110	3280	1680	2180	2440	1090	274	762	788	110	125	255	4110
1934	327	5220	6410	16200	3180	6850	3660	1370	7110	775	3850	10500	16200
1935	5220	2640	8200	8080	3620	456	1210	238	8200	312	3650	3240	8200
1936	14200	12600	17800	22700	497	4720	4840	3410	323	3120	749	4450	22700
1937	12000	3840	1890	12000	1400	1070	1950	5340	6190	2570	1940	788	12000
1938	5280	1030	3330	4980	1470	2840	12300	1800	559	158	5210	5520	12300
1939	3380	13600	8910	2090	8330	1240	4510	14000	924	413	441	2100	14000
1940	2870	9240	3850	2620	3860	1960	1560	10000	840	196	12100	1640	12100
1941	2690	2490	3570	4350	395	5620	1520	730	814	110	98	270	5620
1942	307	6140	6350	646	7750	3860	509	1850	2840	2130	4400	5650	7750
1943	7820	7490	7880	8910	1790	3180	7560	1810	2290	155	698	1720	8910
1944	7360	9820	8530	11400	4480	304	6410	2180	8400	18100	5850	2820	18100
1945	2590	7750	2330	1550	1920	400	4950	995	49400	1090	1090	7110	49400

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1928											235	178	
1929	189	149	659	111	326	123	189	305	152	218	390	503	123
1930	425	523	358	235	151	75	48	19	14	14	24	78	14
1931	270	169	235	420	252	58	83	142	45	16	28	62	16
1932	315	492	353	293	137	103	21	23	19	30	342	279	19
1933	585	559	466	315	105	19	25	54	12	12	12	24	12
1934	25	106	205	227	107	151	129	87	125	112	129	231	25
1935	472	368	487	559	379	92	80	36	32	26	82	161	26
1936	207	492	513	544	114	71	148	97	21	196	151	200	21
1937	1020	736	559	425	282	109	115	158	111	148	270	261	109
1938	420	384	368	218	127	217	218	101	61	43	76	235	43
1939	383	717	538	432	220	73	72	234	86	74	100	96	72
1940	199	407	441	393	98	127	66	42	27	16	97	164	16
1941	373	314	178	271	63	37	89	16	13	12	14	34	12
1942	103	123	263	110	90	99	37	29	20	74	116	377	20
1943	300	350	373	410	120	112	221	27	28	28	31	40	27
1944	293	178	444	616	252	88	36	29	16	160	149	386	16
1945	355	207	460	212	190	63	54	81	59	101	130	469	54

## Haw River near Pittsboro, N. C.

## Mean Weekly Discharge in Million Gallons per day

Week Ending	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Jan. 7		239	659	943	943	1130	201	2050	7560	7040
14		297	499	749	5230	1910	2550	1210	4400	1690
21		231	2470	717	614	1070	142	576	4790	5410
28		298	1140	428	389	859	113	1410	1460	2570
Feb. 4		263	1480	269	1340	636	204	538	969	2850
11		590	2020	248	1100	1020	209	475	2600	1690
18		1030	911	320	911	1960	154	1680	5760	1140
25		1360	597	427	775	1470	162	827	1530	1640
Mar. 4		7170	503	347	459	743	2580	788	736	1180
11		4740	795	510	4810	556	1520	866	801	982
18		1580	532	336	685	635	355	2800	4350	1010
25		1910	604	460	678	1070	775	885	2680	833
Apr. 1		943	442	917	1270	534	2830	3300	2840	698
8		641	730	3400	808	573	995	3070	8530	1570
15		464	506	1010	853	924	4490	1760	3440	956
22		2400	404	645	395	1110	1310	1970	885	596
29		1000	311	879	443	538	424	1380	646	3250
May 6		982	254	595	412	337	240	528	463	1080
13		1200	274	1320	254	530	159	749	340	591
20		475	508	439	291	272	1180	1210	277	891
27		769	264	2270	174	224	528	1740	183	399
June 3		468	276	466	241	659	1450	431	123	421
10		730	346	258	130	151	3560	344	151	616
17		600	462	134	2290	105	795	294	421	419
24		416	595	272	534	73	401	245	1990	425
July 1		2320	122	164	513	115	271	128	616	156
8		879	106	209	187	68	503	137	646	691
15		2200	81	593	111	116	975	457	187	516
22		1090	1090	310	74	103	332	594	691	330
29		375	171	769	82	95	439	305	485	337
Aug. 5		879	121	943	130	240	1110	174	1610	698
12		788	267	1400	210	315	612	132	1130	678
19		432	130	2320	67	224	150	72	269	917
26		525	92	2420	50	345	353	83	163	1290
Sept. 2		495	48	553	29	293	391	66	201	2020
9		231	32	258	198	377	1450	1820	155	2490
16		284	45	119	41	143	2450	333	219	548
23		278	50	98	36	61	1820	113	151	213
30		271	59	90	78	36	475	107	79	176
Oct. 7		8660	34	54	114	54	572	85	1200	885
14		442	32	36	178	45	385	79	1300	630
21		296	41	66	2830	50	255	77	1070	801
28		444	45	57	404	36	186	54	302	711
Nov. 4		885	61	59	782	28	170	183	218	599
11		1120	132	54	1620	54	236	459	194	317
18		1010	183	57	506	52	218	1140	484	898
25		956	236	72	646	61	182	306	211	399
Dec. 2	254	1400	107	78	1640	76	3880	302	211	412
9	275	1800	531	202	383	76	1300	223	827	363
16	251	596	346	382	2650	114	405	1100	2640	305
23	297	866	256	446	1350	102	1030	421	1670	317
31	233	963	1150	518	4450	151	541	230	672	620
Maximum		8660	2470	3400	5230	1960	4490	3070	8530	7040
Minimum		231	32	36	29	28	113	54	79	156



## Haw River near Pittsboro, N. C.

## Mean Weekly Discharge in Million Gallons per day (continued)

Week Ending	1938	1939	1940	1941	1942	1943	1944	1945		
Jan. 7	1470	620	404	1070	157	808	2030	1250		
14	1580	642	464	517	153	519	518	1260		
21	603	917	1170	1080	141	2700	2420	609		
28	736	872	429	614	201	1670	435	457		
Feb. 4	578	1810	509	431	181	2450	325	362		
11	435	4190	3700	378	442	3200	762	406		
18	430	2910	1080	950	1600	885	3900	3330		
25	559	1100	2160	468	904	536	1930	3310		
Mar. 4	627	4980	775	342	704	397	724	1100		
11	1130	1560	756	1270	2610	2530	1800	1360		
18	1130	1740	1510	640	762	1040	2690	608		
25	547	866	614	437	585	1940	3340	598		
Apr. 1	401	1640	769	1640	717	1050	3030	547		
8	672	1270	549	2070	381	505	1000	386		
15	1510	717	1410	937	374	665	3880	309		
22	432	808	652	426	219	2870	1710	635		
29	348	704	652	698	152	840	1240	891		
May 6	200	2820	413	317	238	417	646	457		
13	143	565	360	265	136	314	1350	324		
20	245	411	278	191	1180	377	388	917		
27	467	409	617	143	2130	574	355	440		
June 3	378	437	1360	930	255	402	272	459		
10	652	590	455	455	1870	904	191	183		
17	333	499	377	827	1470	885	167	182		
24	1670	264	717	209	382	775	193	136		
July 1	1250	156	214	171	203	371	134	119		
8	1110	315	481	369	242	645	87	156		
15	782	347	442	840	351	3830	1200	342		
22	629	1230	293	1050	198	782	1400	1900		
29	5760	1060	165	499	137	445	351	519		
Aug. 5	672	704	125	160	150	238	526	182		
12	859	1160	145	94	486	114	704	161		
19	292	3540	5480	59	1010	88	123	386		
26	170	2030	717	176	556	61	107	382		
Sept. 2	136	3220	433	189	144	527	99	174		
9	147	401	424	509	885	623	83	127		
16	96	205	393	151	217	270	248	3930		
23	251	284	165	68	94	179	525	16700		
30	103	151	104	47	350	161	1390	678		
Oct. 7	133	274	89	47	145	86	4260	465		
14	96	157	101	46	113	76	290	481		
21	76	127	72	25	473	89	1300	238		
28	109	112	80	36	685	79	879	408		
Nov. 4	115	174	246	43	455	85	313	255		
11	136	227	221	44	202	262	262	245		
18	129	160	4080	43	187	171	261	262		
25	1870	313	561	53	1000	114	313	528		
Dec. 2	558	222	401	59	503	121	2460	497		
9	917	202	284	161	1470	123	866	2350		
16	762	196	327	130	840	136	1120	749		
23	321	208	665	121	717	107	474	589		
31	1620	879	963	174	1580	775	481	4110		
Maximum	5760	4190	5480	2070	2610	3830	4260	16700		
Minimum	76	112	72	25	94	61	83	119		

Horsepen Creek near Battle Ground, N. C.

Location.-- Water-stage recorder and modified Parshall flume, <sup>lat.</sup> 36°08'30", long. 79°51'20", at bridge on U. S. Highway 411, three-quarters of a mile north of Battle Ground, Guilford County, and about 2½ miles upstream from mouth.

Drainage area.-- 15.9 square miles.

Records available.-- November 1925 to July 1931, May 1934 to date.

Average discharge.-- 13 years, 9.63 million gallons per day.

Extremes.-- Maximum discharge, 995 million gallons per day, Sept. 18, 1945 (gage height, 7.93 feet); minimum discharge, 0.45 million gallons per day, July 24, 1926 (gage height, 0.72 feet), lowered datum.

Remarks.-- Records good.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1925												5.23	-----
1926	-----	21.6	10.7	11.3	-----	2.45	2.98	2.14	-----	2.36	5.72	13.2	-----
1927	6.46	-----	12.0	10.7	3.11	8.79	17.3	-----	-----	-----	6.26	-----	-----
1928	-----	13.0	12.9	-----	-----	-----	-----	-----	-----	-----	5.08	4.30	-----
1929	4.60	27.0	19.0	16.8	9.17	9.43	6.17	5.98	3.63	23.9	13.8	11.6	12.5
1930	11.6	13.3	6.91	6.14	6.20	4.65	2.45	2.71	2.20	2.47	4.70	6.59	5.78
1931	7.04	3.55	6.91	19.6	11.4	4.45	6.72	Discontinued					
1932													
1933													
1934	Re-established May 15				14.0	15.4	18.7	3.86	12.1	3.95	5.73	11.4	-----
1935	11.6	9.36	21.7	23.1	13.9	4.38	3.22	2.19	6.52	2.18	5.84	4.36	8.98
1936	43.3	29.8	22.6	33.5	6.85	12.5	13.0	4.86	7.11	11.8	4.35	13.0	16.9
1937	32.9	13.6	9.50	15.6	11.3	4.70	3.36	7.49	5.58	10.5	7.36	5.01	10.6
1938	10.5	5.85	8.98	5.24	3.74	4.57	10.6	2.95	1.51	1.68	5.83	7.95	5.79
1939	9.11	29.5	12.9	5.90	5.66	3.88	5.25	18.7	2.82	3.24	2.96	5.50	8.66
1940	6.59	17.6	7.43	9.37	13.8	5.59	4.74	29.6	6.31	2.74	16.4	7.49	10.5
1941	8.91	5.88	9.82	8.46	3.22	11.1	14.7	2.31	2.71	1.32	1.63	2.89	6.09
1942	3.73	11.9	22.2	3.55	6.29	7.17	4.83	4.62	2.52	6.02	3.86	10.9	7.30
1943	20.0	16.3	18.5	12.0	5.14	9.30	8.01	2.47	2.03	2.28	3.05	4.39	8.59
1944	14.3	18.8	25.1	19.7	6.72	3.44	6.43	5.41	14.5	7.82	11.2	9.95	11.9
1945	10.9	23.5	8.33	6.02	7.04	3.36	3.21	1.61	39.2	4.78	7.04	24.9	11.6



## Horsepen Creek near Battle Ground, N. C.

## Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1925												26	
1926	----	84	31	67	----	3.9	32	7.1	----	7.8	51	101	----
1927	16	----	61	----	----	45	110	----	----	----	26	----	----
1928	----	60	74	----	----	----	----	----	----	----	6.3	6.3	----
1929	7.8	275	156	136	28	52	32	25	4.9	335	81	58	335
1930	41	63	21	21	57	45	7.8	12	4.8	4.7	16	32	63
1931	29	5.4	38	120	103	30	47	Discontinued					
1932													
1933													
1934	Reestablished May 15			15	79	185	138	12	96	12	44	160	----
1935	76	41	143	185	73	7.8	8.4	5.2	62	5.3	45	15	185
1936	386	243	148	247	8.4	155	119	19	145	93	15	63	386
1937	162	37	16	97	76	9.0	12	45	53	107	40	9.7	162
1938	55	13	70	13	14	29	101	11	2.4	3.4	56	59	101
1939	76	130	70	11	32	20	32	112	4.5	25	5.9	56	130
1940	47	129	25	55	168	21	19	300	56	5.4	153	21	300
1941	26	17	69	39	7.1	204	89	8.4	21	1.8	2.1	8.4	204
1942	13	160	194	6.5	50	49	42	28	23	76	14	45	194
1943	190	156	123	127	17	57	74	17	6.5	4.0	11	34	190
1944	113	103	84	187	44	19	54	45	245	78	98	43	245
1945	56	105	18	15	43	4.5	19	3.1	465	26	50	112	465

## Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1925												1.3	
1926	----	6.1	5.6	5.2	----	1.5	0.65	1.4	----	1.6	2.3	2.6	----
1927	3.9	----	----	----	2.1	2.4	2.6	----	----	----	4.1	----	----
1928	----	7.1	5.6	----	----	----	----	----	----	----	3.7	3.6	----
1929	3.7	3.7	7.1	4.7	4.3	3.0	3.2	2.8	3.2	5.6	4.7	6.3	2.8
1930	5.8	5.6	5.1	3.9	2.6	2.0	1.5	1.2	1.6	1.6	----	2.3	1.2
1931	3.5	2.9	2.6	----	2.9	2.1	2.0	Discontinued					
1932													
1933													
1934	Reestablished May 15			15	3.1	2.6	2.2	2.2	2.5	2.7	2.6	3.9	----
1935	4.8	4.5	4.9	7.1	5.7	2.6	2.2	1.4	1.6	1.9	2.1	3.2	1.4
1936	4.5	9.0	7.8	8.4	5.5	3.9	2.3	2.5	1.6	3.5	3.0	3.7	1.6
1937	7.8	7.8	7.1	5.5	4.8	3.2	2.3	2.6	2.8	3.3	3.9	3.5	2.3
1938	6.1	4.7	4.5	3.5	2.5	2.2	2.1	1.6	1.2	1.4	1.8	2.5	1.2
1939	3.7	6.5	5.0	4.0	3.0	2.1	1.9	2.5	2.3	1.9	2.5	2.5	1.9
1940	3.4	4.5	5.1	4.3	3.0	2.7	2.3	2.4	2.8	2.4	2.5	4.3	2.3
1941	5.8	4.5	4.6	4.3	2.1	2.1	2.6	1.3	1.2	1.2	1.4	1.8	1.2
1942	2.3	3.2	4.4	2.6	2.5	2.3	1.7	1.5	1.2	1.4	2.8	4.7	1.2
1943	4.1	5.0	5.0	4.8	3.5	2.7	3.0	1.4	1.3	1.7	2.1	1.9	1.3
1944	3.7	3.5	6.3	6.5	3.2	1.9	1.7	1.8	1.5	3.6	3.7	5.0	1.5
1945	4.5	4.2	5.8	4.3	4.0	2.6	1.9	1.0	1.0	3.1	3.0	4.8	1.0

## Horsepen Creek near Battle Ground, N. C.

## Mean Weekly Discharge in Million Gallons per day

Week Ending	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Jan. 7		----	5.4	7.1	4.1	7.1	12	----	----	----	19	82
14		----	6.5	7.8	5.1	9.7	6.5				10	23
21		45	7.8	----	4.7	19	7.1				6.3	72
28		11	4.9	8.4	4.7	12	4.3				14	11
Feb. 4		48	6.5	12	4.1	21	3.4				5.4	16
11		10	4.1	18	12	16	3.2				5.6	20
18		9.7	18	12	12	11	4.0				19	74
25		31	----	9.7	15	6.5	3.9				6.3	13
Mar. 4		11	8.4	6.5	81	5.6	3.7				6.1	9.0
11		10	30	9.7	35	9.7	4.0				9.0	12
18		17	9.0	25	10	5.9	3.2				37	39
25		7.1	5.5	11	17	6.5	8.4				12	14
Apr. 1		6.3	8.4	8.4	9.0	5.5	19				61	33
8		7.1	20	6.2	5.9	9.7	47				21	92
15		23	7.1	30	17	5.8	8.4				12	29
22		9.0	7.1	8.4	31	5.1	14				30	10
29		6.5	6.3	----	15	4.2	9.0				9.0	9.0
May 6		----	5.6	----	12	4.0	7.1				6.3	8.4
13		----	3.2	6.5	10	3.8	14				21	7.8
20		----	2.1	6.3	5.4	12	5.0			11	13	6.5
27		----	2.2	----	10	3.6	23			3.4	19	5.7
June 3		2.8	3.0	----	7.8	6.3	3.4			25	5.6	5.5
10		2.2	4.6	16	8.4	10	2.5			50	5.1	4.9
17		2.7	16	4.2	4.8	3.6	6.0			6.4	5.2	5.7
24		1.74	6.1	3.4	3.8	2.5	7.1			3.5	3.7	36
July 1		1.36	5.0	4.4	21	2.3	2.3			2.8	2.9	7.1
8		1.94	14	7.8	5.2	3.0	9.7			17	2.5	16
15		1.36	38	2.8	11	2.1	3.2			39	3.1	6.4
22		7.8	17	----	4.8	3.4	4.2			3.7	3.8	5.0
29		2.7	3.4	----	3.9	1.8	12.0			12	3.8	5.1
Aug. 5		2.9	13	----	3.7	1.5				13	2.3	29
12		1.62	8.4	----	7.1	5.0				4.6	2.8	7.1
19		1.68	----	----	4.8	2.5				3.6	2.1	4.7
26		1.62	27	----	9.7	1.9				3.9	2.0	3.0
Sept. 2		-----	-----	-----	3.6	1.9				2.8	1.7	2.6
9		-----	-----	-----	3.8	1.9				6.5	20	2.8
16		-----	-----	-----	3.7	2.1				26	2.9	2.6
23		-----	-----	-----	3.6	2.8				7.8	2.3	2.1
30		2.5	-----	-----	3.4	1.9				11	2.2	22
Oct. 7		2.2	----	----	85	1.8				5.7	2.1	19
14		1.9	----	----	6.1	1.9				4.3	2.1	9.0
21		2.0	6.5	----	5.6	2.5				3.3	1.9	19
28		3.2	5.0	----	6.5	3.1				3.0	2.1	4.0
Nov. 4		2.8	5.7	5.9	11	5.0				3.2	2.6	3.6
11		2.6	6.0	5.6	6.3	4.5				3.0	5.9	3.4
18	5.2	14	9.0	4.5	23	7.8				2.7	11	6.5
25	3.8	3.7	5.2	5.0	12	3.2				5.4	3.4	3.9
Dec. 2	3.4	3.1	12	4.9	21	2.5				37	4.7	4.1
9	3.5	2.8	----	4.3	12	9.0				6.5	3.5	11
16	3.2	7.8	13	4.6	7.1	2.8				4.3	7.1	14
23	11	5.2	9.7	4.3	10	4.1				7.8	3.9	14
31	3.9	36	7.8	3.7	9.7	11				5.2	3.2	16
Maximum					85	21					61	92
Minimum					3.4	1.5					1.7	2.1



## Horsepen Creek near Battle Ground, N. C.

## Mean Weekly Discharge in Million Gallons per day

Week Ending	1937	1938	1939	1940	1941	1942	1943	1944	1945	
Jan. 7	47	19	6.1	4.1	12	3.4	5.8	25	2.1	
14	11	11	7.1	10	6.4	2.8	5.2	5.4	12	
21	56	6.4	5.5	9.0	11	5.0	40	26	7.8	
28	17	7.1	7.1	4.0	7.1	3.3	25	4.6	5.5	
Feb. 4	24	7.1	25	4.9	5.8	4.1	1.9	3.7	4.7	
11	14	5.4	39	37	5.2	6.5	42	14	5.5	
18	9.0	5.2	28	9.7	7.8	30	9.0	43	50	
25	17	6.5	8.4	18	5.0	7.1	6.1	14	31	
Mar. 4	12	7.8	54	7.1	4.8	9.0	5.2	9.0	11	
11	9.0	17	12	5.8	12	7.1	33	19	11	
18	10	7.8	11	11	6.3	6.5	17	25	6.4	
25	9.0	52	6.1	5.6	6.0	63	22	32	7.1	
Apr. 1	7.1	4.7	7.1	6.5	19	9.7	7.1	32	6.5	
8	18	5.9	7.8	12	15	4.1	5.0	9.0	5.3	
15	7.8	6.3	4.8	12	6.4	4.1	8.4	45	4.5	
22	6.3	5.1	5.5	8.4	4.9	3.2	30	16	4.8	
29	32	3.9	5.4	6.5	7.1	2.8	7.1	12	9.7	
May 6	14	3.3	11	4.5	3.9	2.7	4.9	12	5.4	
13	7.8	2.9	5.0	4.1	4.2	2.6	4.7	7.8	4.3	
20	21	3.6	4.1	5.9	2.9	3.6	4.7	4.8	11	
27	6.1	5.4	3.6	9.0	2.5	17	6.5	4.7	8.4	
June 3	5.0	3.6	4.0	43	3.0	4.4	4.0	3.5	4.5	
10	5.7	3.7	4.6	5.0	2.6	14	14	3.2	4.1	
17	4.5	2.3	2.8	3.7	34	8.4	8.4	5.7	3.5	
24	5.1	8.4	2.4	7.1	3.4	3.8	12	2.6	2.8	
July 1	3.3	3.9	5.4	4.0	6.4	2.9	4.8	2.0	2.6	
8	4.1	5.8	2.8	4.8	12	6.5	4.9	1.9	3.4	
15	2.9	2.5	2.6	6.5	16	9.0	19	17	5.0	
22	2.7	4.8	9.7	5.4	32	2.2	6.1	4.1	2.9	
29	2.7	3.2	3.2	3.0	3.9	2.4	3.4	4.2	2.0	
Aug. 5	4.8	5.0	5.9	4.4	2.5	1.9	2.9	12	2.0	
12	12	2.8	14	3.3	2.1	7.8	2.2	3.7	1.7	
19	3.5	2.1	37	105	1.8	7.1	1.8	2.2	1.7	
26	11	2.0	17	6.1	3.6	2.5	1.5	4.7	1.6	
Sept. 2	4.7	2.8	14	22	1.4	1.9	4.1	2.6	1.4	
9	13	1.6	3.3	6.5	6.5	52	2.3	1.7	2.1	
16	3.7	1.4	2.6	5.0	1.7	1.7	1.4	4.7	20	
23	3.1	1.6	2.5	3.2	1.4	1.3	2.6	17	140	
30	3.1	1.5	2.4	3.0	1.7	2.0	1.9	48	5.0	
Oct. 7	7.1	1.7	6.2	2.6	1.4	1.6	1.8	6.5	7.8	
14	5.3	1.5	2.4	2.6	1.2	2.8	1.9	4.0	4.2	
21	9.0	1.5	2.3	2.4	1.2	2.6	2.4	17	3.7	
28	2	2.1	2.1	2.8	1.3	17	2.8	5.4	3.9	
Nov. 4	5.9	1.9	2.8	5.0	1.4	4.0	2.6	4.1	3.2	
11	4.2	2.3	2.9	2.5	1.6	3.2	4.3	3.9	3.2	
18	13	2.0	2.5	56	1.6	3.0	3.3	3.9	3.9	
25	4.8	17	3.8	5.2	1.8	5.4	2.4	4.5	13	
Dec. 2	8.4	3.7	2.7	5.1	1.8	10	2.1	3.7	9.7	
9	5.0	10	2.6	4.5	3.7	14	2.5	11	29	
16	4.2	4.3	2.8	7.1	3.1	7.1	2.0	17	6.3	
23	4.1	2.6	3.6	7.1	2.4	5.6	2.0	5.5	6.0	
31	6.5	15	13	13	2.6	12	11	6.4	59	
Maximum	56	52	54	105	34	63	42	48	140	
Minimum	2.7	1.4	2.1	2.4	1.2	1.3	1.4	1.7	1.4	

Lower Little River at Linden, N. C.

Location.- Water-stage recorder, lat. 35°16'00", long. 79°46'40", at bridge on State Highway 21, 1 3/4 miles west of Linden, Cumberland County, 2 miles upstream from Stewart Creek, and 4 1/2 miles upstream from mouth. Datum of gage is 71.37 feet above mean sea level (levels by Corps of Engineers, U. S. Army).

Drainage area.- 460 square miles.

Records available.- November 1928 to date.

Average discharge.- 17 years, 358 million gallons per day.

Extremes.- Maximum discharge, not determined, approximately Sept. 18, 1945 during period of back-water from Cape Fear River, (gage height, 41.47 feet); minimum discharge, 17 million gallons per day (regulated), Oct. 14, 1940.

Remarks.- Marked diurnal fluctuation and considerable regulation at low flow caused by power plant above station.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1928												256	
1929	364	704	1615	717	434	476	328	351	310	1525	833	730	699
1930	523	582	370	355	267	189	138	114	73.0	74.9	139	290	258
1931	341	200	279	543	554	126	121	736	123	65.9	72.4	401	298
1932	563	380	528	263	315	344	64.4	57.9	36.3	117	265	536	289
1933	523	641	392	273	164	47.5	109	368	226	39.2	65.2	73	241
1934	74.3	115	309	448	101	251	312	244	245	120	188	476	241
1935	532	441	523	542	293	99.5	89.1	65.9	559	105	291	388	326
1936	1011	1114	840	1234	222	364	191	568	293	872	521	1162	698
1937	1114	1112	634	743	297	167	121	364	206	132	191	143	431
1938	203	182	203	346	134	238	323	167	292	162	300	415	247
1939	441	968	915	378	199	116	342	541	187	114	133	163	372
1940	302	442	443	379	159	147	69.8	78.2	38.0	27.6	114	132	193
1941	188	193	359	561	118	71.1	367	114	56.1	58.8	64.5	185	194
1942	171	267	724	352	225	121	97.5	469	320	211	186	348	291
1943	564	492	556	466	189	98.2	700	172	166	81.4	120	239	320
1944	717	886	1220	966	398	112	512	348	174	329	230	399	524
1945	388	601	463	218	142	133	285	614	1151	466	289	850	466



Lower Little River at Linden, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1928												368	
1929	724	2320	3720	1820	1190	956	956	840	1070	8010	1710	1420	8010
1930	840	1040	736	685	1240	526	423	346	90	226	216	604	1240
1931	630	271	526	1100	2000	249	320	3130	449	84	90	1040	3130
1932	2290	526	2290	578	1190	1190	138	146	64	488	724	1080	2290
1933	808	969	645	672	539	176	539	1080	969	51	96	90	1080
1934	117	255	592	1330	244	645	1010	698	605	229	982	1310	1330
1935	846	872	956	1010	956	330	191	209	1420	416	614	969	1420
1936	2070	2330	1230	3550	441	1290	1050	1940	775	1770	1270	2870	3550
1937	3250	2140	924	1210	665	364	305	1100	665	207	452	323	3250
1938	484	297	488	846	425	438	1550	463	1190	339	872	898	1550
1939	602	2200	2330	872	321	245	898	1360	539	263	234	372	2330
1940	535	827	988	853	319	322	388	239	66	47	284	268	988
1941	277	394	743	1570	284	180	1280	198	119	235	118	395	1570
1942	297	486	1370	788	556	286	286	1890	943	380	380	617	1890
1943	1150	956	1070	1230	301	207	1740	391	531	142	245	885	1740
1944	1540	1780	3110	2460	1090	211	2350	1050	568	911	640	736	3110
1945	640	1090	859	432	249	432	859	2720	6460	956	468	1650	6460

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1928												207	
1929	152	260	808	342	116	197	96	116	96	397	397	449	96
1930	320	371	216	189	100	74	54	68	47	37	90	123	37
1931	146	102	171	294	198	50	49	55	46	55	64	74	46
1932	260	271	198	146	74	116	27	32	25	31	90	167	25
1933	324	437	203	141	39	25	24	78	36	28	36	54	24
1934	52	60	84	117	34	50	48	60	91	70	98	252	34
1935	355	280	286	274	125	35	36	26	87	65	129	199	26
1936	330	530	504	466	76	79	67	156	129	388	327	351	67
1937	691	691	425	388	65	76	70	78	78	61	123	61	61
1938	110	114	120	126	45	107	38	41	70	70	76	245	38
1939	291	488	366	212	72	50	69	235	70	52	73	57	50
1940	149	238	261	223	60	57	23	20	22	20	42	56	20
1941	88	96	151	240	37	34	64	54	32	32	42	54	32
1942	90	101	340	120	62	44	30	41	72	92	93	189	30
1943	301	279	262	268	84	41	229	68	31	48	58	67	31
1944	355	306	557	547	141	50	50	70	72	116	105	255	50
1945	264	251	271	120	67	35	65	129	133	271	225	227	35

Lower Little River at Linden, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Jan. 7		223	405	314	355	524	70	665	1180	924
14		416	360	404	1180	474	77	594	1230	1120
21		407	704	421	419	578	61	402	982	872
28		340	590	276	357	508	94	541	820	762
Feb. 4		397	635	200	404	514	84	353	678	2310
11		437	756	187	357	563	91	298	1260	1070
18		678	583	239	386	795	125	628	1610	917
25		917	442	205	423	717	142	398	917	1080
Mar. 4		2020	379	194	273	444	109	564	665	840
11		2030	510	300	1140	519	208	364	614	698
18		1260	339	207	445	401	323	560	937	640
25		1330	316	339	331	385	389	399	937	539
Apr. 1		1400	306	312	349	219	459	756	1010	495
8		917	420	678	211	215	363	616	1690	749
15		508	318	419	402	244	743	736	1910	814
22		846	428	536	265	435	518	439	820	612
29		486	275	590	178	234	202	406	678	846
May 6		420	187	391	172	194	110	252	402	541
13		484	140	624	160	331	53	164	267	339
20		220	646	340	222	97	141	245	191	293
27		685	171	988	599	53	83	578	131	178
June 3		422	121	253	351	121	169	148	101	108
10		483	260	178	148	46	534	201	173	251
17		483	236	127	827	52	191	74	346	142
24		357	191	81	300	34	152	65	495	194
July 1		524	89	68	136	27	116	43	528	98
8		189	81	63	107	41	471	50	301	90
15		204	99	161	53	78	459	91	94	92
22		627	273	163	39	235	134	117	117	133
29		332	109	125	39	89	242	107	121	158
Aug. 5		245	163	277	67	251	146	59	801	211
12		318	82	533	59	228	444	48	982	118
19		400	128	352	74	496	262	35	427	406
26		448	112	1800	56	427	136	89	196	306
Sept. 2		313	70	377	37	329	199	128	358	788
9		433	63	264	32	517	138	743	175	302
16		220	72	64	32	229	253	975	339	194
23		222	84	64	41	105	450	302	336	123
30		188	78	74	43	52	177	337	347	98
Oct. 7		3770	48	62	59	44	140	190	924	141
14		782	57	62	57	36	162	85	1140	127
21		468	79	64	258	36	108	77	1070	109
28		724	72	67	97	41	85	68	530	152
Nov. 4		534	161	74	107	50	112	136	408	132
11		1130	169	70	406	59	143	297	442	143
18		801	129	74	190	67	152	413	853	325
25		672	131	72	308	76	134	262	432	177
Dec. 2	233	827	123	78	220	60	665	269	404	138
9	257	1140	236	618	186	63	491	217	569	101
16	251	685	187	427	587	85	295	575	1830	80
23	281	582	296	333	652	78	497	447	1740	129
31	239	573	457	325	782	74	402	342	795	251
Maximum		3770	756	1800	1180	795	743	975	1910	2310
Minimum		188	48	62	32	27	53	35	94	80



Lower Little River at Linden, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1938	1939	1940	1941	1942	1943	1944	1945		
Jan. 7	244	431	187	187	225	474	775	343		
14	252	342	346	144	158	426	629	474		
21	129	528	413	218	157	621	1100	430		
28	191	453	287	189	149	617	498	352		
Feb. 4	211	516	250	183	167	678	362	267		
11	187	756	470	160	231	756	704	375		
18	176	1060	401	271	241	436	1320	698		
25	158	930	590	173	339	333	891	859		
Mar. 4	157	2070	432	195	461	287	866	678		
11	198	1220	349	441	891	756	975	546		
18	309	730	617	342	579	446	1250	419		
25	202	481	371	230	885	613	1930	350		
Apr. 1	134	417	418	543	612	540	975	314		
8	268	342	295	866	353	328	743	211		
15	556	298	380	571	555	417	1350	159		
22	306	562	501	303	299	698	982	210		
29	313	303	345	538	192	452	833	282		
May 6	121	306	235	246	245	267	481	206		
13	85	203	165	151	120	197	730	114		
20	105	177	143	90	388	187	275	189		
27	144	172	117	56	227	157	256	97		
June 3	209	129	183	45	91	113	174	93		
10	306	160	213	62	114	69	115	89		
17	295	134	179	69	189	143	105	86		
24	224	84	84	58	130	103	134	207		
July 1	160	96	59	109	61	99	85	166		
8	87	306	61	155	66	636	100	181		
15	47	198	121	395	62	1260	390	141		
22	72	371	85	782	82	569	1230	430		
29	995	517	30	228	189	499	299	354		
Aug. 5	454	348	24	156	68	236	698	891		
12	242	329	31	97	90	203	619	641		
19	89	536	166	98	544	198	229	395		
26	64	513	87	121	1180	112	125	749		
Sept. 2	132	898	55	96	313	168	140	247		
9	245	255	38	81	561	134	91	292		
16	127	156	47	50	351	97	141	330		
23	602	111	39	41	151	240	340	3390		
30	252	154	28	52	218	198	140	866		
Oct. 7	222	205	26	65	172	87	406	614		
14	137	97	24	48	132	68	205	611		
21	103	90	26	39	218	70	255	370		
28	197	80	30	50	293	85	494	335		
Nov. 4	132	110	65	100	217	99	205	290		
11	217	129	64	59	151	166	200	359		
18	132	110	175	61	159	122	195	289		
25	550	168	118	64	173	101	240	252		
Dec. 2	402	123	117	65	278	103	444	262		
9	450	114	89	213	322	143	450	982		
16	355	103	96	129	341	129	465	698		
23	257	121	143	163	367	123	301	743		
31	599	306	196	309	394	557	304	1100		
Maximum	995	2070	617	866	1180	1260	1930	3390		
Minimum	47	80	24	39	61	68	85	86		

Lower Little River at Manchester, N. C.

Location.- Water-stage recorder, lat. 35°11'40", long. 78°59'15", at bridge on State Highway 24 at Manchester, Cumberland County, 1¼ miles downstream from Atlantic Coast Line Railroad and 12 miles southwest of Linden.

Drainage area.- 348 square miles.

Records available.- November 1938 to date.

Average discharge.- 7 years, 259 million gallons per day.

Extremes.- Maximum discharge, not determined, occurred during period of back-water from Cape Fear River, Sept. 18 or 19, 1945 (gage height, 29.00 feet) from floodmark on well; minimum discharge, 13 million gallons per day (regulated) Sept. 18, 19, 1945, (gage height, 0.23 feet ).

Remarks.- Large diurnal fluctuation and considerable regulation for short periods caused by power plant above station.

Cooperation.- Gage-height record collected in cooperation with U. S. Weather Bureau.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1938											336	311	
1939	341	713	672	283	152	87.2	213	411	141	88.5	110	132	276
1940	236	362	338	282	119	103	53.1	56.7	29.8	21.8	91.7	107	149
1941	149	141	260	470	93.7	58.9	278	69.1	39.9	43.0	45.3	141	149
1942	124	194	518	271	176	107	84.6	357	246	156	144	270	221
1943	441	388	430	351	147	80.1	545	129	130	65.9	101	171	248
1944	497	643	917	733	313	94.3	463	298	150	273	200	323	409
1945	302	464	364	174	112	111	220	432	990	353	225	597	361



Lower Little River at Manchester, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1938											672	691	
1939	475	1710	1730	645	239	183	659	1030	307	193	193	298	1730
1940	420	630	691	588	253	303	253	181	49	32	225	234	691
1941	214	266	562	1620	237	138	788	194	86	147	81	381	1620
1942	209	368	872	630	420	255	269	1570	711	266	307	485	1570
1943	859	730	846	872	231	177	1350	282	415	127	217	604	1350
1944	1130	1250	3000	1960	911	171	2300	898	423	820	549	646	3000
1945	488	904	685	346	205	410	711	1850	5810	704	360	1230	5810

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1938											69	190	
1939	236	385	287	132	68	36	47	181	59	40	68	49	36
1940	116	187	209	162	34	34	18	18	20	15	30	59	15
1941	83	81	93	198	31	23	36	28	21	21	24	33	21
1942	79	74	255	49	32	35	27	34	36	65	83	150	27
1943	243	231	214	208	50	24	197	43	14	35	34	31	14
1944	217	240	423	410	110	41	45	59	59	71	114	205	41
1945	205	200	211	78	38	25	39	86	67	212	179	169	25

Lower Little River at Manchester, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1938	1939	1940	1941	1942	1943	1944	1945		
Jan. 7		328	148	152	160	373	528	270		
14		278	275	114	112	334	436	359		
21		402	326	173	118	475	756	339		
28		344	209	147	103	487	355	273		
Feb. 4		397	200	138	125	542	270	212		
11		523	393	121	172	585	530	291		
18		788	333	186	174	346	930	538		
25		698	475	126	241	266	635	665		
Mar. 4		1560	355	148	360	232	619	603		
11		853	281	321	652	592	698	429		
18		534	451	237	412	355	879	322		
25		361	273	172	601	481	1580	277		
Apr. 1		326	320	398	440	386	711	256		
8		266	212	749	256	247	539	158		
15		231	296	467	431	328	1060	132		
22		404	381	251	235	506	724	174		
29		227	244	447	152	348	646	231		
May 6		227	172	206	203	209	385	157		
13		148	120	116	91	159	557	88		
20		140	112	73	304	147	220	158		
27		141	96	41	173	121	207	71		
June 3		105	131	38	75	81	134	70		
10		127	131	51	108	57	98	70		
17		105	133	61	167	116	88	67		
24		55	65	44	112	79	109	183		
July 1		73	40	92	49	85	71	149		
8		163	48	109	55	483	88	151		
15		105	97	334	50	956	366	81		
22		264	56	572	68	446	1110	323		
29		321	25	166	172	426	264	297		
Aug. 5		227	20	98	55	178	571	616		
12		269	25	56	83	171	542	401		
19		454	127	39	407	142	203	315		
26		353	56	92	891	76	109	548		
Sept. 2		659	37	68	245	107	130	187		
9		188	31	61	427	194	81	234		
16		121	36	33	258	76	139	346		
23		87	30	28	114	176	273	2980		
30		124	24	39	178	156	118	626		
Oct. 7		148	21	47	143	72	321	456		
14		78	21	37	103	56	183	452		
21		75	21	28	154	53	222	288		
28		65	21	43	208	74	401	269		
Nov. 4		90	47	65	152	81	181	230		
11		111	48	40	114	144	176	265		
18		92	143	44	120	97	168	228		
25	432	135	95	48	140	83	202	198		
Dec. 2	319	101	100	44	219	79	395	207		
9	339	94	72	178	251	112	355	691		
16	264	83	77	101	252	101	361	490		
23	204	101	121	85	284	93	244	514		
31	434	242	156	217	317	380	255	775		
Maximum		1560	475	749	891	956	1580	2980		
Minimum		55	20	28	49	53	71	67		



Northeast Cape Fear River near Chinquapin, N. C.

Location.- Water-stage recorder, lat.  $34^{\circ}49'$ , long.  $77^{\circ}50'$ , 1,000 feet downstream from bridge on State Highway 41, half a mile downstream from Muddy Creek, and  $1\frac{1}{4}$  miles west of Chinquapin, Duplin County.

Drainage area.- 600 square miles.

Records available.- July 1940 to date.

Average discharge.- 5 years, 373 million gallons per day.

Extremes.- Maximum Discharge, 7,100 million gallons per day, Oct. 16, 1942, (gage height, 16.74 feet); minimum discharge, 6.5 million gallons per day, Oct. 25, 1941 (gage height, 0.68 feet).

Remarks.- Records fair.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1940								241	23.5	11.9	36.4	62.3	
1941	107	180	687	457	79.5	58.4	422	175	24.9	11.6	20.4	110	195
1942	149	267	784	221	62.9	155	101	824	678	1581	282	553	475
1943	630	769	719	794	304	163	718	80.1	25.8	10.7	23.7	107	360
1944	622	914	1126	844	136	18.4	54.6	252	58.4	127	81.4	313	377
1945	372	492	348	97.5	68.5	65.2	391	1115	1333	243	253	734	459

Northeast Cape Fear River at Chinquapin, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1940								1070	42	16	63	132	
1941	143	285	1820	969	308	250	1270	610	88	26	36	282	1820
1942	236	355	1430	487	145	494	307	1890	2440	7110	465	756	7110
1943	1100	1450	1980	1740	535	605	1580	205	97	19	35	457	1980
1944	1050	1690	1520	1310	301	52	166	930	160	247	218	495	1690
1945	580	930	736	149	134	247	1090	2160	2820	452	398	1110	2820

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1940								10	10	9.7	13	47	
1941	74	95	176	117	14	14	35	23	11	6.5	16	20	6.5
1942	95	214	309	78	25	12	13	65	84	78	224	287	12
1943	381	297	284	353	136	29	49	26	11	7.8	12	37	7.8
1944	260	194	547	350	48	7.8	14	25	16	48	50	174	7.8
1945	229	196	169	46	25	16	79	139	295	139	129	185	16



Northeast Cape Fear River at Chinquapin, N. C.

Mean Weekly Discharge in Million Gallons per day.

Week Ending	1940	1941	1942	1943	1944	1945				
Jan. 7		129	193	472	598	337				
14		96	125	484	623	529				
21		92	111	678	891	376				
28		97	139	846	519	304				
Feb. 4		125	252	917	251	220				
11		144	245	1220	317	373				
18		218	240	730	1320	383				
25		216	273	382	1490	717				
Mar. 4		201	357	297	814	736				
11		853	885	466	1080	367				
18		1280	1180	490	1380	282				
25		334	638	782	1140	334				
Apr. 1		554	636	1530	1120	220				
8		885	344	846	1030	103				
15		474	234	424	885	61				
22		172	187	866	1090	102				
29		275	101	956	424	114				
May 6		207	61	284	249	100				
13		115	34	180	199	58				
20		48	88	340	80	45				
27		21	85	356	90	76				
June 3		16	32	331	55	58				
10		17	26	166	24	32				
17		68	376	348	14	56				
24		50	179	68	12	33				
July 1		131	96	39	10	163				
8		92	75	698	19	124				
15		282	49	672	24	186				
22		769	30	1340	119	801				
29		672	190	388	70	554				
Aug. 5	12	105	208	133	293	168				
12	72	58	165	66	659	937				
19	180	34	982	109	107	859				
26	736	403	1720	76	42	1910				
Sept. 2	79	231	756	63	32	1280				
9	32	38	801	29	30	749				
16	26	19	1670	13	30	1190				
23	19	14	224	16	96	2420				
30	13	16	116	30	83	1190				
Oct. 7	14	15	101	15	134	357				
14	12	12	698	9.7	93	330				
21	10	9.7	4820	8.4	89	189				
28	11	7.8	1150	9.0	198	141				
Nov. 4	12	18	468	14	92	133				
11	16	26	291	19	56	231				
18	40	21	273	26	71	266				
25	57	17	237	26	89	349				
Dec. 2	50	19	262	34	174	214				
9	53	44	431	46	332	469				
16	49	73	711	48	457	704				
23	51	98	621	65	283	904				
31	94	232	525	265	204	982				
Maximum		1280	4820	1530	1490	2420				
Minimum		7.8	26	8.4	10	32				

Reedy Fork near Gibsonville, N. C.

Location.-- Water-stage recorder, lat. 36°10'30", long. 79°37'00", a quarter of a mile downstream from Huffines Mill, 1¼ miles upstream from Buffalo Creek, and 6 miles northwest of Gibsonville, Guilford County.

Drainage area.-- 133 square miles.

Records available.-- September 1928 to date.

Average discharge.-- 17 years, 75.9 million gallons per day.

Extremes.-- Maximum discharge, 4,740 million gallons per day, Sept. 18, 1945, (gage height, 16.56 feet); minimum discharge, 0.39 million gallons per day, sometime during period Nov. 12 to Dec. 8, 1941, (gage height, 0.65 feet), from range line.

Remarks.-- Considerable diurnal fluctuation caused by power plants above station. Flow partly regulated by reservoir 14 miles above station from which city of Greensboro diverted an average of 8.2 million gallons per day during year for water supply.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1928									254	51.0	37.0	38.3	
1929	45.3	158	221	117	61.3	122	71.7	62.7	24.9	216	120	101	110
1930	117	112	63.0	57.8	41.0	48.8	19.5	8.91	6.91	7.75	26.7	57.5	46.8
1931	57.6	36.6	46.8	127	91.1	23.4	62.9	130	19.9	9.69	11.9	43.0	55.2
1932	129	74.3	163	58.3	32.0	46.1	7.23	7.56	19.5	135	90.4	178	78.8
1933	129	118	74.3	69.1	42.8	12.0	9.82	76.2	18.1	11.5	13.2	19.6	49.2
1934	28.4	60.1	163	155	62.1	110	117	29.5	79.5	46.4	42.4	122	84.6
1935	108	87.9	152	219	110	42.1	26.0	14.1	38.5	15.7	45.5	34.0	74.3
1936	388	224	196	300	36.1	99.5	56.3	49.9	17.1	114	30.4	96.9	134
1937	362	130	79.5	123	111	47.6	43.5	103	54.1	102	69.8	54.0	107
1938	88.5	53.6	69.1	53.8	30.0	49.8	97.5	34.4	16.5	14.9	70.4	63.3	53.6
1939	62.5	206	138	72.4	69.1	24.4	67.2	152	26.5	21.8	25.1	49.2	75.6
1940	59.4	133	71.1	72.4	67.2	78.8	46.6	203	47.7	13.8	134	62.7	82.0
1941	67.8	50.6	71.1	84.6	25.5	65.2	107	16.7	32.4	5.72	6.98	22.0	46.2
1942	26.9	89.8	143	30.7	64.0	91.1	23.3	51.1	10.1	29.8	26.4	58.2	53.6
1943	105	157	140	114	43.3	73.0	61.9	9.43	15.9	7.95	15.9	28.0	63.7
1944	90.4	140	216	229	56.2	17.0	42.6	20.8	49.4	92.4	51.0	78.8	89.8
1945	77.5	165	64.6	47.8	67.8	16.5	30.6	7.17	328	35.5	49.4	161	86.6



Reedy Fork near Gibsonville, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1928									1330	128	93	79	
1929	99	1550	1810	463	142	678	198	122	-----	2290	175	235	2290
1930	286	249	135	146	221	174	105	25	16	13	109	165	286
1931	121	118	120	384	233	94	458	404	66	17	19	111	458
1932	678	168	704	140	109	177	11	39	93	1420	148	525	1420
1933	225	202	175	137	109	21	22	441	99	22	19	62	441
1934	77	419	485	769	241	277	846	106	261	166	207	820	846
1935	176	181	388	711	284	116	69	26	323	38	169	79	711
1936	2400	1010	717	1810	100	963	296	202	222	704	90	302	2400
1937	1580	249	129	459	307	119	194	342	226	222	127	112	1580
1938	229	117	207	117	71	142	484	302	27	23	323	168	484
1939	184	452	452	155	454	82	436	517	65	61	39	177	517
1940	187	342	130	168	332	348	180	1930	132	21	982	211	1930
1941	152	114	184	153	90	599	397	45	157	11	---	39	599
1942	53	698	1430	121	317	443	78	157	36	134	94	136	1430
1943	373	808	553	634	100	274	261	21	54	13	32	130	808
1944	245	598	672	1490	132	35	162	95	756	930	381	238	1490
1945	181	416	162	114	205	27	145	13	3880	125	150	499	3880

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1928									24	25	23	24	
1929	25	25	39	25	19	20	20	17	6.1	18	32	28	6.1
1930	24	32	25	18	14	9.0	5.6	1.2	1.7	1.9	7.8	7.8	1.2
1931	15	14	15	22	17	2.9	5.4	17	5.6	5.9	5.6	12	2.9
1932	18	26	20	19	9.7	7.8	2.9	1.3	2.7	11	29	20	1.3
1933	37	37	27	22	9.7	7.8	2.1	9.0	4.0	3.7	7.1	7.1	2.1
1934	13	12	22	25	14	10	12	9.0	13	16	16	31	9.0
1935	37	33	39	43	32	16	12	7.8	11	8.4	12	16	7.8
1936	19	28	27	37	14	8.4	16	9.7	3.2	23	21	21	3.2
1937	62	44	32	30	28	19	18	19	19	23	32	26	18
1938	35	31	28	23	17	16	19	16	8.4	13	16	21	8.4
1939	25	90	65	24	19	7.1	3.7	20	20	16	19	20	3.7
1940	19	25	28	28	17	10	11	14	15	9.0	13	20	9.0
1941	27	23	23	28	12	11	17	3.5	3.0	0.8	2.3	7.8	0.8
1942	17	23	22	9.0	6.5	7.8	4.7	4.1	0.6	2.5	14	16	0.6
1943	19	39	39	32	9.7	6.5	13	2.3	5.3	2.2	9.0	9.0	2.2
1944	19	15	30	44	20	8.4	1.7	5.0	1.6	17	21	25	1.6
1945	27	28	28	28	21	7.1	1.6	1.3	1.3	18	24	25	1.3

Reedy Fork near Gibsonville, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	
Jan. 7		41	80	68	89	158	34	150	459	610	
14		56	85	86	342	178	36	119	352	154	
21		37	197	67	65	120	25	68	730	552	
28		49	111	28	52	77	14	118	157	194	
Feb. 4		33	107	34	75	70	32	72	64	207	
11		70	169	25	101	116	15	40	169	125	
18		105	108	44	70	136	16	136	517	105	
25		104	61	42	48	153	36	92	152	121	
Mar. 4		730	72	34	63	76	354	66	66	98	
11		297	79	41	391	62	244	77	61	82	
18		108	76	26	76	39	36	245	221	83	
25		83	66	44	108	121	74	103	240	78	
Apr. 1		112	46	90	140	68	200	318	332	73	
8		53	88	251	76	48	118	330	782	91	
15		45	56	130	78	96	320	129	310	113	
22		272	53	61	23	92	140	163	98	36	
29		101	27	77	50	53	52	140	65	258	
May 6		100	36	47	58	41	21	43	59	126	
13		63	23	121	18	65	15	109	35	116	
20		48	87	65	40	34	125	175	39	175	
27		40	34	150	12	28	52	143	23	60	
June 3		54	36	50	23	32	159	45	15	79	
10		80	89	15	10	13	216	45	16	56	
17		72	74	14	129	12	117	66	51	57	
24		59	14	12	42	9.7	33	40	298	32	
July 1		321	12	37	12	11	13	19	59	23	
8		76	10	9.0	9.0	9.0	21	23	37	43	
15		103	31	88	7.1	9.0	334	21	28	62	
22		73	32	12	7.1	8.4	34	31	94	47	
29		28	9.0	137	5.6	12	66	32	36	32	
Aug. 5		53	8.4	65	6.5	48	99	14	142	27	
12		59	17	131	16	59	25	19	76	89	
19		52	7.8	136	5.6	142	13	9.7	34	69	
26		60	5.4	182	4.6	81	26	16	12	107	
Sept. 2		85	4.9	108	17	13	32	11	10	188	
9		26	4.5	24	24	44	30	101	8.4	103	
16	74	24	5.7	18	11	12	105	34	10	58	
23	596	18	9.0	17	12	9.7	157	14	11	21	
30	35	20	9.0	9.0	23	8.4	45	12	41	31	
Oct. 7	76	788	7.1	8.4	27	13	89	15	240	79	
14	38	65	6.3	9.0	33	9.7	41	19	60	82	
21	38	31	8.4	9.7	467	13	48	12	123	77	
28	41	46	8.4	9.7	61	12	19	14	53	134	
Nov. 4	50	74	12	12	73	10	21	19	42	131	
11	25	117	16	11	111	14	24	35	24	52	
18	36	122	45	12	65	15	46	87	54	110	
25	52	139	39	13	81	13	37	34	22	51	
Dec. 2	36	112	11	14	101	13	245	48	25	62	
9	34	180	67	24	38	14	164	30	75	48	
16	37	63	65	21	125	13	57	44	127	34	
23	48	83	18	55	140	28	63	34	91	61	
31	37	90	89	75	393	25	63	23	112	60	
Maximum		788	197	251	467	178	354	330	782	610	
Minimum		18	4.5	8.4	4.6	8.4	13	9.7	8.4	21	



Reedy Fork near Gibsonville, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1938	1939	1940	1941	1942	1943	1944	1945		
Jan. 7	112	59	45	95	28	63	143	121		
14	132	52	59	48	21	45	54	116		
21	45	59	121	80	32	152	165	55		
28	68	57	28	63	28	92	24	36		
Feb. 4	68	138	52	57	29	200	39	33		
11	34	234	218	34	45	362	39	42		
18	54	233	101	50	163	102	255	229		
25	58	122	155	64	115	60	230	302		
Mar. 4	70	340	70	35	57	41	68	100		
11	76	127	67	86	439	233	156	96		
18	114	129	93	72	70	110	208	48		
25	57	91	43	39	30	191	225	68		
Apr. 1	29	93	74	113	74	71	359	48		
8	76	104	41	141	32	43	109	38		
15	49	68	138	74	50	61	479	30		
22	59	74	49	54	17	291	162	38		
29	39	39	74	69	14	85	177	87		
May 6	23	191	56	26	12	37	59	41		
13	20	50	43	41	10	29	92	35		
20	29	29	26	23	68	49	31	79		
27	39	28	74	16	183	39	60	67		
June 3	39	25	220	25	33	49	33	91		
10	45	41	62	21	154	51	16	18		
17	28	26	25	205	174	153	22	20		
24	62	16	118	23	31	67	17	14		
July 1	70	12	18	19	19	37	9.7	12		
8	119	36	28	52	38	30	6.1	26		
15	33	12	87	105	28	163	25	38		
22	37	109	67	221	16	41	119	41		
29	229	89	16	85	9.0	32	21	25		
Aug. 5	32	78	38	25	8.4	19	59	10		
12	81	139	39	20	95	11	25	7.1		
19	20	222	743	12	88	5.7	10	7.1		
26	17	163	54	17	28	4.3	8.3	6.3		
Sept. 2	17	135	47	10	14	9.7	8.4	5.5		
9	16	30	94	108	16	21	7.1	7.8		
16	17	24	58	12	13	18	16	48		
23	17	22	17	7.8	4.5	14	56	1280		
30	17	21	21	9.0	7.1	14	130	71		
Oct. 7	17	33	12	7.8	8.4	7.8	255	45		
14	13	19	14	4.5	9.7	7.1	22	48		
21	13	17	14	4.8	21	6.5	45	24		
28	16	17	14	5.1	56	8.4	77	29		
Nov. 4	16	25	47	6.2	62	12	23	26		
11	19	26	34	7.8	23	21	23	25		
18	17	21	397	7.1	17	18	24	31		
25	206	30	59	7.1	31	14	28	91		
Dec. 2	61	23	54	7.8	37	12	191	85		
9	52	23	23	23	77	17	70	194		
16	80	47	54	24	60	16	128	69		
23	23	25	65	18	38	12	34	31		
31	103	103	112	26	63	67	49	335		
Maximum	229	340	743	221	439	362	479	1280		
Minimum	13	16	12	4.5	4.5	4.3	6.1	5.5		

Rockfish Creek near Hope Mills, N. C.

Location.- Water-stage recorder, lat. 34°58', long. 78°55', at bridge on U. S. Highway 301, just upstream from Little Rockfish Creek, 1 3/4 miles east of town of Hope Mills, Cumberland County, and 5 3/4 miles upstream from mouth.

Drainage area.- 284 square miles, including that of Little Rockfish Creek.

Records available.- February 1939 to date.

Average discharge.- 6 years, 216 million gallons per day.

Extremes.- Maximum discharge, 5,170 million gallons per day, Sept. 18, 1945, (gage height, 31.75 feet); minimum discharge, 1.68 million gallons per day (regulated) Oct. 24, Nov. 22, 23, 1941, (gage height, 3.28 feet).

Remarks.- Large diurnal fluctuation and considerable regulation caused by mills and reservoirs above station.

Mean Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Yearly Mean
1939			460	284	209	171	297	333	203	178	192	183	
1940	232	226	234	228	154	115	95.6	123	90.4	82.0	145	145	156
1941	154	145	187	218	103	109	212	129	104	93.7	113	205	148
1942	180	187	365	214	193	152	147	377	302	200	187	234	229
1943	253	224	295	267	207	146	454	182	169	121	172	213	225
1944	324	390	462	408	274	177	252	237	164	182	174	209	271
1945	209	224	196	150	105	110	172	407	709	280	251	412	269



Rockfish Creek near Hope Mills, N. C.

Maximum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Maximum of Year
1939			969	578	366	339	646	587	412	379	278	341	
1940	388	348	383	366	242	224	167	318	160	119	317	311	388
1941	231	223	371	349	176	335	437	456	278	203	231	422	456
1942	273	279	659	594	350	289	265	2180	988	293	278	324	2180
1943	362	344	417	561	403	226	1140	333	297	172	342	579	1140
1944	541	711	711	646	525	307	937	769	269	354	296	337	937
1945	330	323	291	291	194	227	397	1570	4510	415	322	769	4510

Minimum Discharge in Million Gallons per day

Year	January	February	March	April	May	June	July	August	September	October	November	December	Minimum of Year
1939			161	57	17	17	16	81	14	17	19	21	
1940	22	23	32	47	19	19	16	15	21	22	21	33	15
1941	38	26	15	32	19	19	25	26	23	8.4	1.8	13	1.8
1942	3.5	23	111	28	17	7.1	14	3.0	42	24	25	59	3.0
1943	74	42	128	44	26	25	169	34	25	23	25	25	23
1944	136	62	204	243	129	48	45	39	39	39	37	52	37
1945	42	39	67	36	30	27	41	156	83	164	158	150	27

Rockfish Creek near Hope Mills, N. C.

Mean Weekly Discharge in Million Gallons per day

Week Ending	1939	1940	1941	1942	1943	1944	1945			
Jan. 7		183	157	200	249	341	211			
14		271	143	184	236	317	231			
21		262	140	161	245	434	203			
28		223	152	178	280	255	204			
Feb. 4		166	154	158	265	219	161			
11		218	140	183	269	320	200			
18		217	147	183	216	520	238			
25		262	155	203	189	419	267			
Mar. 4	924	247	144	265	193	370	231			
11	558	202	238	379	320	437	196			
18	399	291	209	339	244	499	196			
25	308	231	135	442	314	555	185			
Apr. 1	287	233	223	315	335	415	178			
8	283	203	220	223	204	364	163			
15	252	211	244	253	238	495	126			
22	379	247	167	191	337	396	121			
29	247	239	224	191	295	387	190			
May 6	279	168	134	198	196	302	138			
13	210	167	113	159	200	377	93			
20	200	133	110	234	205	261	109			
27	158	135	87	206	189	208	85			
June 3	203	159	72	158	237	197	94			
10	214	145	75	132	124	160	89			
17	165	131	94	163	145	139	105			
24	148	98	89	183	152	226	94			
July 1	130	90	232	136	162	169	160			
8	272	97	176	148	486	157	109			
15	191	105	231	164	556	230	157			
22	304	104	329	116	356	443	235			
29	395	74	123	136	448	209	189			
Aug. 5	444	60	108	102	302	367	450			
12	382	112	109	172	172	307	561			
19	254	229	77	885	214	192	271			
26	255	112	121	416	155	129	420			
Sept. 2	348	72	253	216	148	169	203			
9	210	94	113	501	140	135	242			
16	154	115	101	330	146	169	306			
23	164	86	83	166	176	195	2110			
30	263	78	85	225	211	147	338			
Oct. 7	266	83	112	187	118	147	324			
14	166	76	97	176	120	172	300			
21	158	74	83	193	121	171	252			
28	145	81	56	245	122	258	254			
Nov. 4	167	98	137	187	141	152	234			
11	183	128	131	169	219	160	284			
18	187	169	118	188	187	160	251			
25	198	161	87	186	151	176	240			
Dec. 2	177	144	117	225	142	243	233			
9	175	130	225	229	164	253	486			
16	158	129	192	239	162	223	353			
23	179	162	138	269	187	172	359			
31	230	167	278	204	332	165	498			
Maximum	924	291	329	885	556	555	2110			
Minimum	130	60	56	102	118	129	85			



Miscellaneous Measurements in Cape Fear River Basin  
Million Gallons Per Day

Date	Stream	Location	Tributary to	Discharge
June 27, 1900	*Haw River	At Moncure	Cape Fear River	497
June 29, 1918	*Cape Fear River	At Fayetteville	Atlantic Ocean	1070
Jan. 22, 1923	do	do	do	1200
Mar. 3, 1923	do	do	do	7560
Mar. 4, 1923	do	do	do	5250
Mar. 5, 1923	do	do	do	3950
Mar. 5, 1923	do	do	do	3780
Mar. 6, 1923	do	do	do	3180
July 17, 1923	do	do	do	1230
July 18, 1923	do	do	do	2410
July 18, 1923	do	do	do	4780
July 18, 1923	do	do	do	4900
Sept. 25, 1923	do	do	do	2820
Oct. 17, 1923	do	do	do	389
Aug. 24, 1924	do	do	do	859
Aug. 21, 1926	do	do	do	382
Nov. 15, 1940	do	do	do	14300
Apr. 7, 1941	do	do	do	12500
Apr. 8, 1941	do	do	do	8200
Feb. 19, 1942	do	do	do	13100
Mar. 10, 1942	do	do	do	16900
July 15, 1943	do	do	do	18600
Mar. 22, 1944	do	do	do	22900
Oct. 4, 1944	do	do	do	12100
Sept. 19, 1945	do	do	do	73600
Sept. 20, 1945	do	do	do	78800
Mar. 15, 1931	do	At Elizabethtown	do	1600
Apr. 4, 1931	do	do	do	5970
Apr. 9, 1931	do	do	do	15600
Apr. 12, 1931	do	do	do	6140
Apr. 13, 1931	do	do	do	4170
May 15, 1931	do	do	do	3450
Sept. 18, 1930	Troublesome Creek	At bridge on Highway 70, 4 miles from Reidsville	Haw River	3.46
Aug. 22, 1923	Reedy Fork	At Summerfield	do	4.56
Sept. 18, 1945	do	At Lake Bryant Dam near Greensboro	do	5230

Miscellaneous Measurements in Cape Fear River Basin (Continued)  
Million Gallons Per Day

Date	Stream	Location	Tributary to	Discharge
Sept. 18, 1945	Reedy Fork	Below Hardy Mill near Greensboro	Haw River	5460
Aug. 22, 1925	+Horsepen Creek	At Battle Ground	Reedy Fork	2.33
July 7, 1931	*Horsepen Creek	do	do	3.37
June 21, 1906	S. Buffalo Creek	At Southern Railroad trestle about 2 miles South of Greensboro	do	4.9
Sept. 5, 1932	Bolin Creek	At old highway No. 10 near Chapel Hill	New Hope Creek	0.011
Sept. , 1920	Morgan Creek	At Carboro	do	0.41
Dec. 8, 1925	*W. Fork Deep River	Near High Point	Deep River	5.12
July 17, 1928	do	do	do	8.66
July 17, 1928	do	do	do	14.5
July 7, 1923	do	Above High Point water supply near Jamestown	do	34.4
Apr. 7, 1923	do	do	do	35.3
Sept. 18, 1945	do	At High Point Reservoir Dam near High Point	do	3240
Sept. 15, 1923	Deep River	At Chiltons Mill, 6 miles East of High Point	Cape Fear River	27.6
Oct. 9, 1922	do	Four miles above Coleridge	do	109
Oct. 10, 1922	do	do	do	238
July 11, 1902	do	At Cumcock	do	145
Aug. 28, 1902	do	do	do	147
June 27, 1900	* do	At Moncure	do	145
Sept. 23, 1930	Rocky River	At Sanford-Pittsboro highway	Deep River	1.52
Sept. 14, 1932	---	Flow in Sanford's water supply reservoir	do	.127
Sept. 19, 1930	Lower Little River	Two miles south of Vass	Cape Fear River	39.2
Oct. 1, 1902	*Lower Little River	Near Manchester	do	317
Oct. 2, 1902	do	do	do	265
June 29, 1918	+	do	do	138
Sept. 28, 1937	*	do	do	144
Sept. 29, 1937	do	do	do	97.5
Sept. 30, 1937	do	do	do	38.4
Oct. 6, 1937	do	do	do	196
Oct. 15, 1937	do	do	do	204
Feb. 10, 1937	do	do	do	180
Mar. 7, 1937	do	do	do	191
Apr. 7, 1938	do	do	do	230
May 24, 1938	do	do	do	184
June 4, 1938	do	do	do	379
June 4, 1938	do	do	do	379



Miscellaneous Measurements in Cape Fear River Basin (Continued)  
Million Gallons Per Day

Date	Stream	Location	Tributary to	Discharge
Aug. 29, 1938	Lower Little River	Near Manchester	Cape Fear River	201
Aug. 14, 1919	do	At Reaves bridge near Linden	do	481
Aug. 16, 1919	do	do	do	208
May 22, 1945	Big Rockfish Creek	At Lakefield	Rockfish Creek	65.2
Sept. 6, 1902	do	Probably at McNeils	do	81.4
May 27, 1903	do	At McNeils	do	233
May 27, 1903	do	do	do	224
May 27, 1903	do	do	do	223
July 1, 1918	do	Probably near present site of gaging station near Hope Mills	do	164
Sept. 6, 1902	Rockfish Creek	Near Brunt	Cape Fear River	205
Oct. 16, 1902	do	do	do	284
Feb. 4, 1931	*Rockfish Creek	Near Fayetteville (Formerly near Brunt)	do	269
May 27, 1903	Little Rockfish Creek	At McNeils	Rockfish Creek	92.4
Sept. 6, 1902	do	Probably at McNeils	do	104
July 1, 1918	do	Probably near present site of gaging station near Hope Mills	do	47.2

\* Measurement made at location of former gaging station.

+ Measurement made at site where gaging station was subsequently located.

## CLIMATOLOGICAL

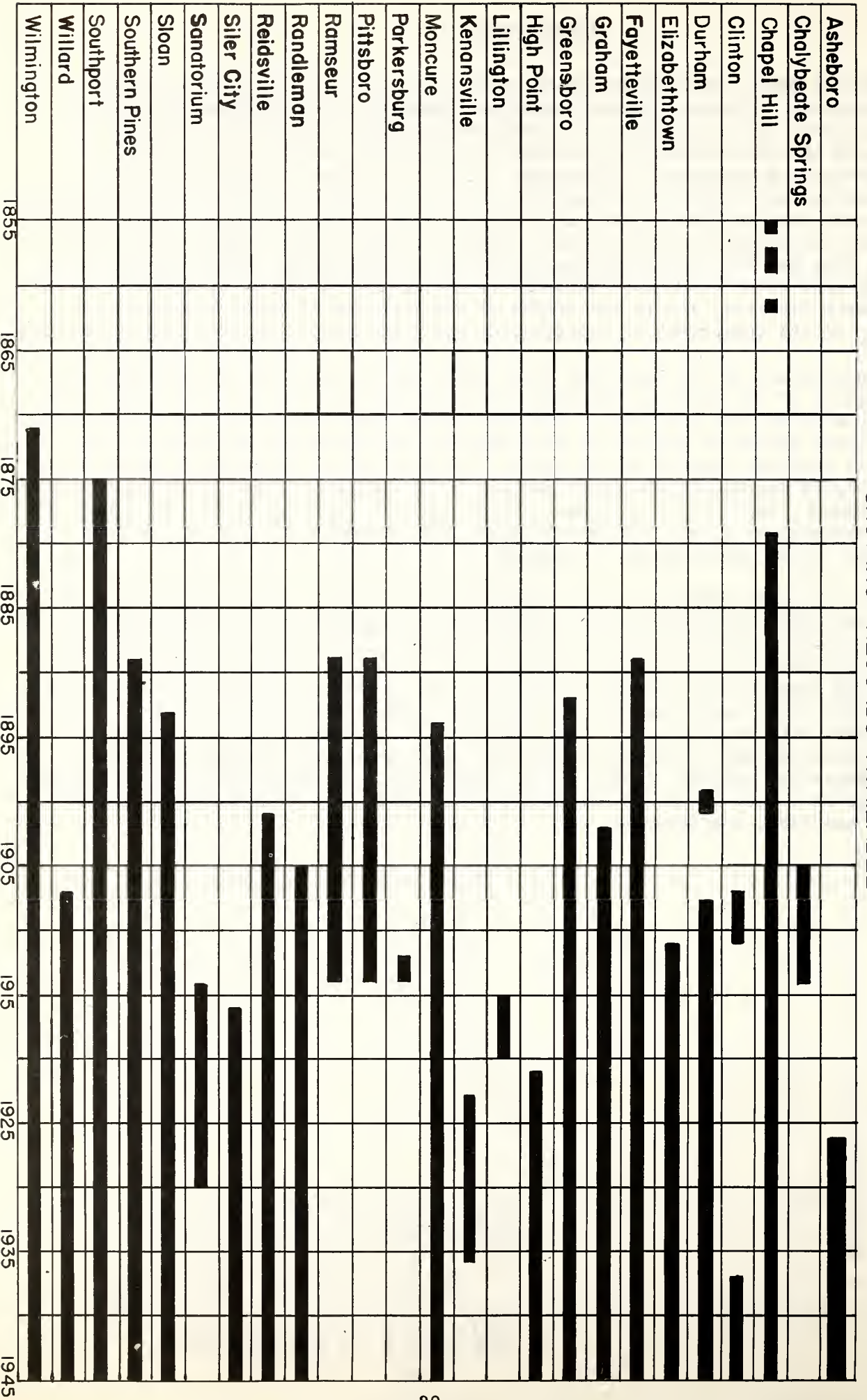
The United States Weather Bureau at the present time is operating eighteen rainfall stations, of which fourteen also give temperature, in the Cape Fear River basin. Only four of these records are published in this bulletin as a very good conception of the whole basin can be obtained from these and the maps showing rainfall isohyets and temperature isotherms. In some of these records it will be noticed that average temperatures are published but no maximum or minimum temperatures. This is due to the practice in the early days of the Weather Bureau of using ordinary thermometers and reading them three times daily. A good average temperature can be secured by this method, but no maximum or minimum temperatures. Daily records for all stations in this river basin are available in the office of the U. S. Weather Bureau, Raleigh, North Carolina, and in the office of the Division of Water Resources and Engineering of the Department of Conservation and Development, Raleigh, North Carolina.

The temperature of the Cape Fear River Basin may be described as moderate, due to the location of the basin in the warm temperate zone and the relative small variations in elevation from sea level. The mean annual temperature for the entire basin for the 25 year period of 1921-45 is 61.6 degrees, as determined by means for the period of 11 stations located in the basin. The mean annual temperature varies from approximately 64 degrees in the lower portion to 60 degrees in the extreme northwestern portion. Summer temperatures in excess of 100 degrees are occasionally recorded, but freezing temperature of more than one day's duration are rare. The effect of the formation of ice on the streams is negligible.

Most of the precipitation in the Cape Fear River Basin occurs as rainfall; the small amounts of snow which fall are unimportant, since it is not sufficient to remain and cause damaging spring freshets. The mean annual rainfall for the entire basin for the 25 year period of 1921-45 is 46.53 inches, as determined from the records of 14 stations located in the basin. The lowest mean annual rainfall occurs at Durham with 40.36 inches and the highest mean annual rainfall occurs at Southern Pines with 49.77 inches. The yearly rainfall is rather evenly distributed during the four seasons of the year, July and August being the months of maximum rainfall, while the minimum usually occurs in October. Variations from approximately 60 inches to 36 inches in annual rainfall for the basin have been recorded for the years 1929 and 1925, respectively.



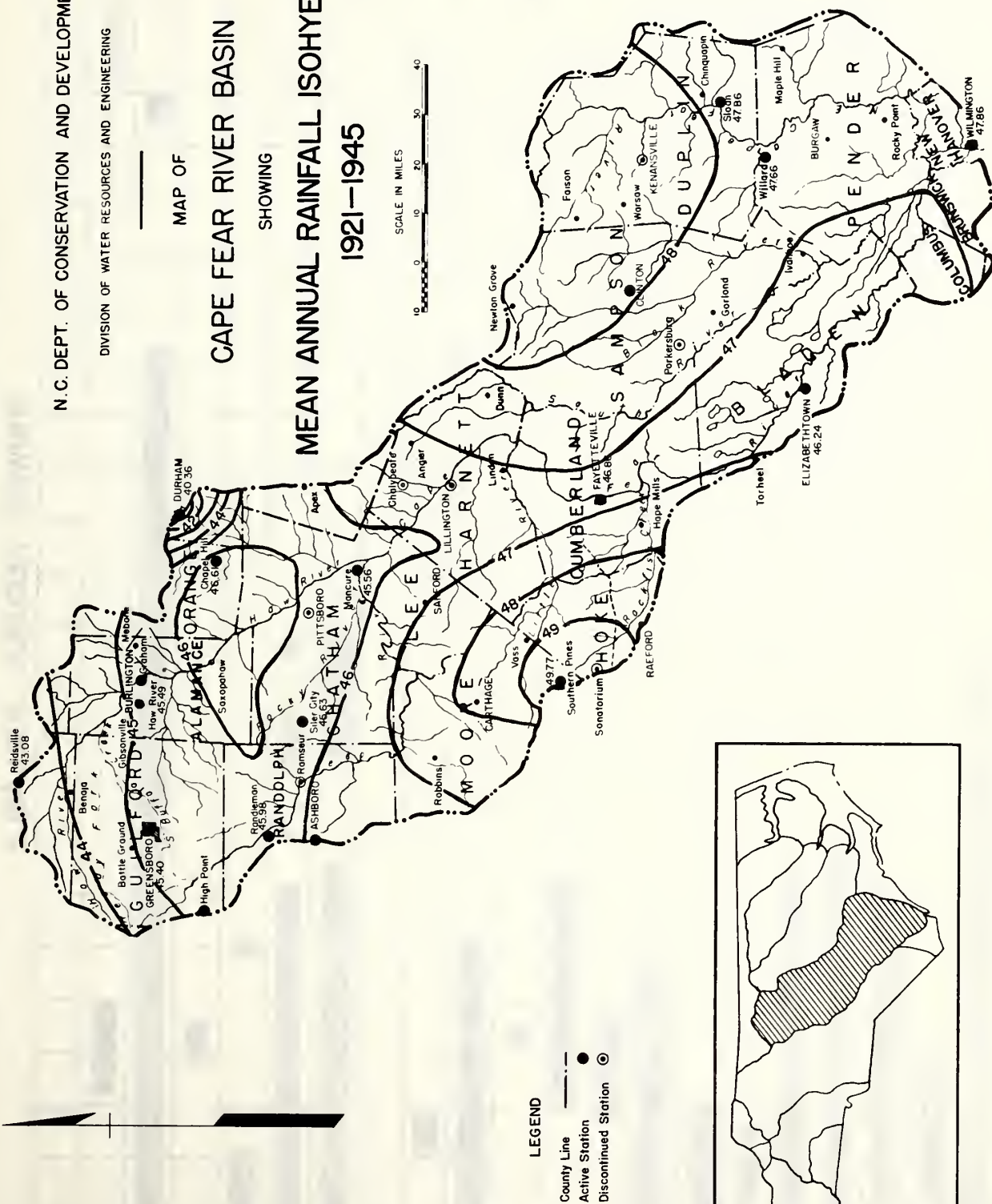
# RAINFALL STATIONS IN CAPE FEAR RIVER BASIN SHOWING RECORDS AVAILABLE



# CAPE FEAR RIVER BASIN

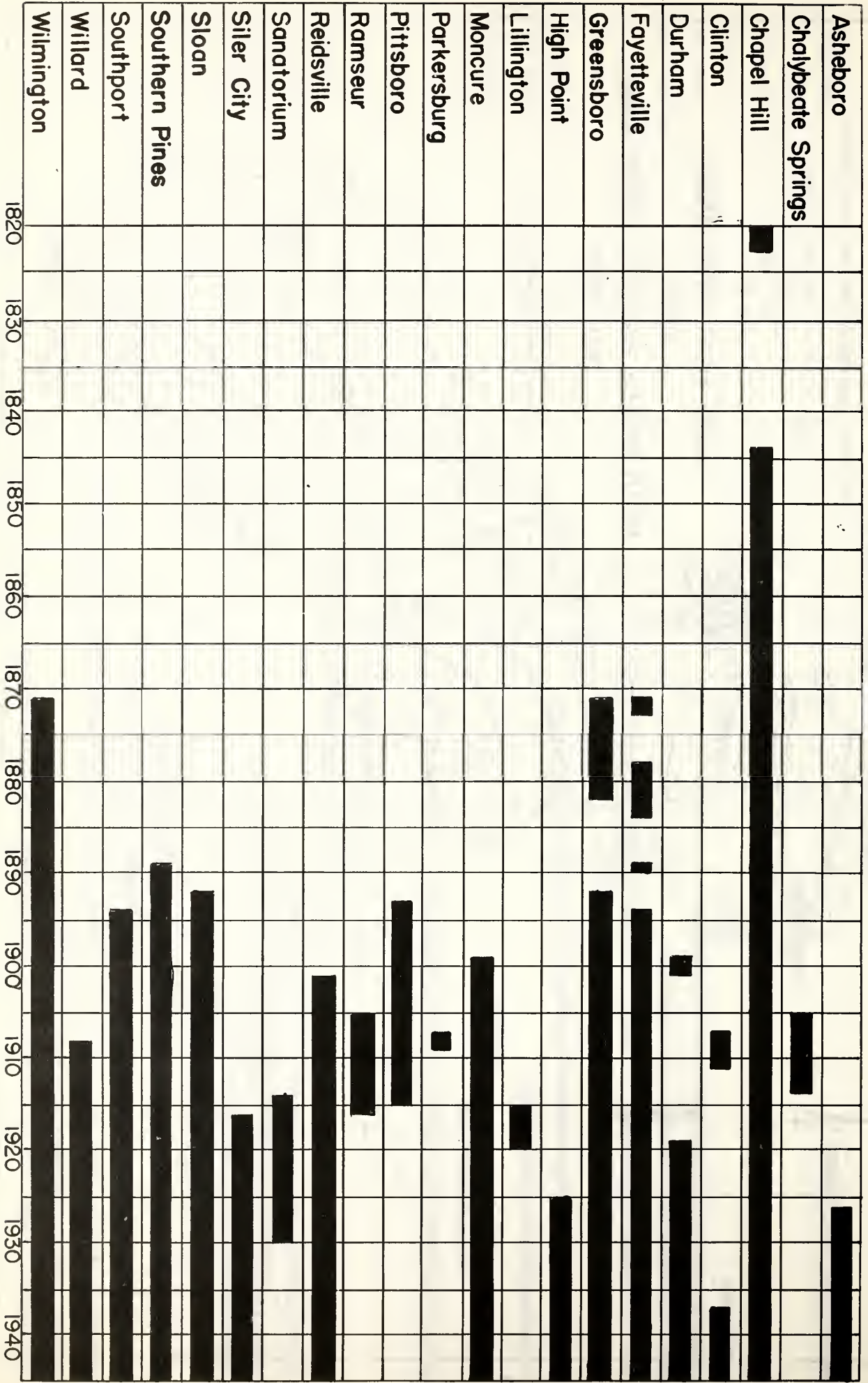
## SHOWING

MEAN ANNUAL RAINFALL ISOHYETALS  
1921-1945





# TEMPERATURE STATIONS IN CAPE FEAR RIVER BASIN SHOWING RECORDS AVAILABLE



N.C. DEPT. OF CONSERVATION AND DEVELOPMENT

DIVISION OF WATER RESOURCES AND ENGINEERING

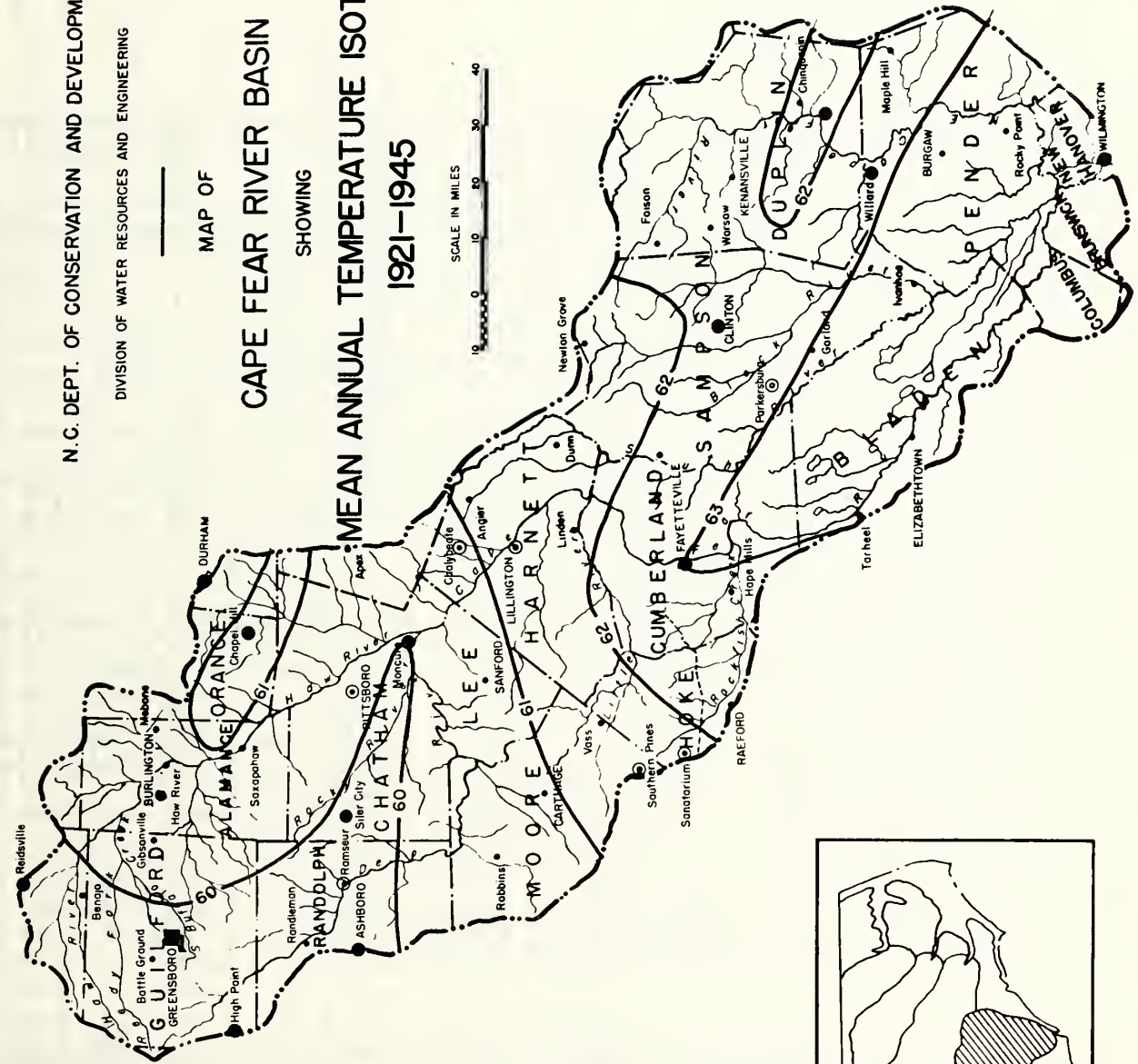
MAP OF

CAPE FEAR RIVER BASIN

SHOWING

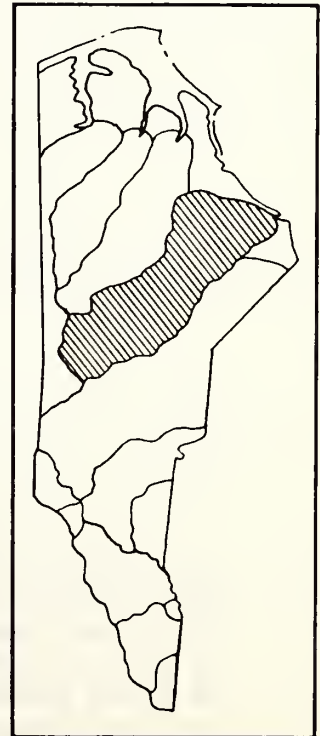
MEAN ANNUAL TEMPERATURE ISOTHERMS  
1921-1945

SCALE IN MILES  
0 10 20 30 40



LEGEND

- County Line ———
- Active Station ●
- Discontinued Station ○





Precipitation in Chapel Hill, Orange County, North Carolina: Monthly  
and annual (in inches and hundredths)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1855	---	---	---	1.66	3.83	2.37	1.45	3.79	7.46	2.78	3.74	3.46	---
1857	2.81	0.14	2.30	2.79	4.38	2.54	4.40	3.66	---	---	2.77	4.93	---
1858	2.60	5.28	2.82	2.76	2.40	3.75	6.15	2.72	4.11	1.95	3.39	6.01	43.94
1859	3.13	3.35	6.28	3.44	3.66	.69	3.95	5.69	4.07	2.24	2.70	2.98	42.18
1861	6.10	4.17	2.77	6.30	---	---	---	---	---	---	---	---	---
1879	---	---	---	---	---	---	---	1.10	1.81	---	---	2.45	---
1880	.32	1.79	4.74	1.91	.24	2.52	3.40	9.34	1.11	2.05	6.85	6.55	40.82
1881	6.50	3.20	3.85	4.70	2.45	3.15	1.60	1.80	3.40	2.85	3.13	4.20	40.83
1882	7.78	4.05	1.95	3.19	3.45	---	3.33	2.78	2.24	3.43	.77	3.42	---
1883	5.02	3.84	6.91	7.35	1.60	5.67	4.25	2.67	6.65	3.25	1.77	1.84	50.82
1884	4.95	2.58	6.20	2.68	4.97	3.89	6.63	4.64	.52	.83	1.68	6.98	46.55
1885	5.24	2.73	4.45	2.71	4.34	1.36	3.95	1.98	---	6.27	3.81	4.21	---
1886	.85	---	4.97	5.99	4.00	6.22	7.48	9.91	2.86	1.47	2.79	4.13	---
1887	2.81	4.62	3.93	2.56	6.59	---	6.59	---	1.39	11.21	.85	6.19	---
1888	3.37	4.01	8.73	1.11	9.88	1.30	---	---	7.05	1.81	2.57	4.40	---
1889	6.71	4.24	2.33	3.75	6.02	---	---	---	---	3.32	3.23	.46	---
1890	2.23	3.63	3.80	1.86	4.81	3.66	7.70	5.30	4.83	5.69	T	3.35	46.86
1891	4.59	5.70	7.75	2.13	8.75	4.61	5.40	11.71	1.38	1.58	3.12	1.47	58.19
1892	6.22	3.22	2.74	3.15	3.39	6.12	3.72	.82	1.97	.27	4.35	2.77	38.74
1893	3.04	5.41	1.48	1.49	4.04	4.21	2.09	9.13	6.40	6.75	1.54	3.48	49.06
1894	4.30	3.65	1.78	2.04	4.03	1.76	5.80	6.21	7.93	6.84	1.85	2.33	48.52
1895	8.90	2.33	5.12	11.42	3.99	4.60	3.19	4.46	.62	1.13	4.67	3.63	54.06
1896	3.39	6.46	2.54	2.23	6.80	5.06	8.52	1.28	8.39	1.08	3.09	2.23	51.07
1897	2.66	5.66	4.52	3.31	6.98	1.69	6.68	2.74	1.15	3.32	3.77	2.72	45.20
1898	1.85	1.03	5.30	3.11	3.15	2.66	6.38	14.48	4.74	4.39	2.98	2.07	52.14
1899	3.71	7.79	6.79	3.68	4.51	2.26	4.95	1.34	2.47	5.96	2.14	2.24	47.84
1900	3.23	5.08	4.99	6.09	2.62	4.45	6.38	3.61	3.40	1.10	5.00	4.31	50.26
1901	2.39	1.52	3.72	5.89	11.38	5.69	6.12	11.25	4.75	2.13	1.94	4.56	61.34
1902	2.30	6.92	2.95	3.38	2.23	3.10	1.25	3.71	4.51	3.83	2.94	4.88	42.00
1903	4.06	5.52	10.89	7.99	1.18	4.87	1.50	3.80	1.31	4.98	1.71	2.58	50.39
1904	2.67	4.55	4.65	1.50	3.70	7.20	3.10	4.10	5.30	2.00	4.20	3.38	46.35
1905	2.79	7.29	2.43	5.19	7.85	3.37	8.37	8.36	.63	1.71	1.05	7.81	56.85
1906	5.00	3.21	5.61	1.32	3.12	3.90	7.60	10.30	1.90	2.38	.99	3.54	48.87
1907	.67	4.92	4.75	6.05	3.78	9.51	2.60	3.80	3.70	.80	5.17	7.06	52.81
1908	4.40	3.80	5.20	2.40	2.80	5.20	5.90	12.00	3.60	3.28	2.58	3.53	54.69
1909	1.48	4.66	2.29	4.11	3.56	6.22	3.70	5.47	2.98	2.52	.55	2.68	40.22
1910	3.70	3.34	1.64	5.19	3.39	5.80	3.00	7.20	1.80	5.63	2.48	4.20	47.37
1911	2.02	2.56	3.52	4.25	2.37	2.80	2.00	7.90	1.00	3.08	3.29	4.40	39.19
1912	2.40	3.52	6.47	3.88	7.17	4.51	.57	1.70	3.17	.99	2.00	2.20	38.58
1913	4.50	3.19	4.99	2.89	3.16	4.10	2.05	4.03	4.58	2.86	2.38	3.68	42.41
1914	2.52	3.19	3.16	1.90	1.15	3.42	5.76	4.30	4.00	2.74	3.74	7.46	43.34
1915	5.66	3.54	2.20	1.90	5.96	2.90	4.64	5.40	1.50	2.60	1.61	2.54	40.45
1916	2.39	4.05	1.79	3.15	2.19	8.16	5.74	4.50	.80	2.03	.78	2.41	37.99
1917	4.32	3.34	7.48	3.39	3.42	8.43	7.40	2.70	4.80	2.60	1.90	1.90	51.68
1918	4.30	1.10	3.30	6.82	3.52	2.63	7.10	3.20	4.30	1.27	2.57	4.25	44.36
1919	5.05	3.85	3.45	3.11	6.28	3.65	12.99	4.00	.30	3.70	.44	1.74	48.56
1920	3.42	4.74	3.81	6.87	2.12	6.29	6.08	6.50	3.20	1.68	5.70	4.13	54.54



Precipitation in Chapel Hill, Orange County, North Carolina: Monthly and annual (in inches and hundredths) continued -

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1921	3.74	3.49	3.74	2.72	5.00	1.59	1.00	0.67	2.14	1.65	3.38	3.05	32.17
1922	5.85	6.53	7.81	3.02	5.22	6.07	3.92	2.83	.10	5.67	.55	3.81	51.38
1923	3.56	3.17	5.45	3.53	2.11	1.77	5.29	3.12	5.19	1.13	2.66	2.44	39.42
1924	4.73	3.73	2.41	4.79	4.62	8.68	7.82	9.21	14.01	1.48	2.26	3.41	67.15
1925	5.72	4.10	1.27	2.36	1.99	2.55	1.63	4.43	3.45	2.82	2.01	2.58	34.91
1926	4.60	4.59	4.96	2.58	1.34	4.10	6.23	2.27	1.93	1.02	2.83	4.28	40.73
1927	1.56	3.59	4.25	3.14	1.79	4.80	7.60	6.50	5.37	4.80	1.59	6.06	51.05
1928	1.65	3.11	2.92	7.06	3.77	5.39	3.92	8.67	12.15	2.64	.57	1.72	53.57
1929	1.81	7.54	5.70	4.54	6.52	7.21	6.64	5.24	3.11	10.65	6.18	2.78	67.92
1930	4.00	1.09	2.03	2.53	2.26	6.13	4.78	1.68	1.86	3.68	2.26	4.25	36.55
1931	1.78	1.38	2.49	5.67	4.56	0.54	6.86	9.82	0.25	1.12	0.20	6.48	41.15
1932	6.10	2.55	4.53	1.56	2.93	5.13	2.53	2.47	1.53	8.05	5.46	6.62	49.46
1933	3.23	3.30	1.53	3.89	3.09	3.63	5.30	8.07	0.77	1.00	0.77	1.63	36.21
1934	1.39	4.78	4.80	4.85	4.24	5.00	8.52	4.54	5.30	0.99	5.69	3.11	53.21
1935	3.52	2.53	4.60	3.78	3.97	1.18	5.20	2.77	8.23	1.81	3.34	3.49	44.42
1936	6.27	4.51	5.30	5.58	0.18	5.23	10.04	2.76	2.12	4.20	2.15	4.90	53.24
1937	8.08	4.01	1.95	5.05	0.99	4.47	3.31	11.09	2.75	3.67	2.09	1.97	49.43
1938	3.69	1.29	2.39	3.43	4.37	6.39	9.24	1.57	4.50	1.14	3.79	3.61	45.41
1939	4.35	7.99	4.83	2.74	3.71	5.68	7.33	8.57	0.57	1.53	1.86	2.51	51.67
1940	3.07	2.46	3.26	3.32	3.38	1.67	2.56	6.13	0.68	0.46	6.13	2.68	35.80
1941	2.28	1.88	4.21	3.55	0.74	3.99	6.76	0.77	1.04	1.02	0.44	3.61	30.29
1942	1.86	3.18	5.30	0.95	3.67	3.75	5.81	6.61	5.43	4.57	2.91	5.81	49.85
1943	4.53	1.46	5.22	3.29	2.76	5.20	4.42	2.48	2.34	0.86	1.43	3.46	37.45
1944	3.46	5.37	7.13	4.47	1.94	2.63	7.43	3.46	9.03	2.28	4.80	2.50	54.50
1945	2.37	5.38	1.89	2.89	3.02	1.55	12.12	4.24	12.15	2.39	1.76	8.48	58.24
Averages													
*25 yrs	3.73	3.72	4.00	3.65	3.13	4.17	5.85	4.80	4.24	2.83	2.68	3.81	46.61
Record	3.74	3.85	4.19	3.74	3.85	4.19	5.26	5.08	3.68	2.97	2.72	3.76	47.00

\* Period of 1921-45



Average Temperature - Chapel Hill, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1820	36.9	56.8	50.8	63.5	66.4	78.0	78.2	76.0	71.2	56.8	50.5	44.8	60.8
1821	35.3	49.2	48.0	57.2	68.0	77.0	76.0	77.3	75.4	51.9	45.9	39.2	59.2
1822	36.6	43.9	53.7	61.3	69.2	78.0	79.9	75.9	72.1	64.7	59.6	43.3	61.5
1844	38.2	43.0	50.0	66.1	73.4	75.5	81.3	76.4	70.7	58.2	52.6	42.1	60.6
1845	45.8	46.3	53.4	67.7	68.0	80.8	81.2	77.7	71.6	58.8	50.0	35.0	61.4
1846	41.8	40.9	52.4	60.9	70.5	73.7	76.4	77.4	73.4	58.0	52.4	45.5	60.3
1847	41.7	45.5	47.9	60.7	63.8	72.1	74.5	72.9	68.8	58.7	54.2	43.6	58.7
1848	44.0	43.4	50.2	58.1	69.0	74.6	76.2	74.2	68.2	60.4	46.6	53.1	59.8
1849	40.0	38.1	51.8	58.4	65.8	76.6	74.1	75.3	68.5	57.8	55.6	42.7	58.7
1850	45.2	43.1	48.5	55.2	63.8	73.4	78.5	76.9	70.1	58.7	52.0	45.3	59.2
1851	42.2	49.2	52.2	58.6	68.0	72.9	79.5	75.1	68.1	59.2	46.9	39.4	59.3
1852	36.0	45.6	53.7	56.5	68.8	72.5	77.4	73.2	67.8	62.9	48.0	46.0	59.0
1853	40.0	46.6	50.0	60.1	66.1	76.5	77.2	76.4	69.7	57.5	53.4	41.9	59.6
1854	40.7	45.3	54.8	56.9	68.7	75.9	81.1	78.3	74.9	62.2	49.2	39.5	60.6
1855	41.8	36.4	46.8	64.0	67.7	74.1	80.2	76.7	73.6	58.5	53.9	43.5	59.8
1856	28.9	37.0	44.0	61.5	67.3	77.3	81.9	76.1	70.4	58.8	49.9	38.6	57.6
1857	28.4	51.0	45.6	52.1	66.3	76.8	75.9	77.5	71.6	56.1	47.5	47.5	58.0
1858	44.5	36.8	46.6	58.8	68.0	76.8	79.0	78.6	67.8	62.0	45.9	46.7	59.3
1859	41.0	45.2	54.4	59.2	68.2	74.6	78.2	75.1	70.8	57.0	52.5	41.6	59.8
1861	39.4	46.2	49.2	56.6	66.0	77.0	80.0	78.0	74.0	68.0	58.0	48.0	63.0
1869	46.4	54.0	47.8	62.2	67.0	77.1	82.0	80.1	74.5	68.0	51.3	47.6	63.2
1870	51.0	43.0	46.4	57.0	67.8	77.0	80.0	78.0	74.0	68.0	58.0	48.0	63.0
1872	39.2	42.4	47.8	58.2	69.0	73.0	80.4	75.7	70.4	58.6	44.0	34.2	63.0
1873	39.2	42.4	47.8	63.4	71.6	77.0	75.6	71.8	58.3	46.4	43.4	63.0	63.0
1874	45.4	44.3	52.0	52.3	63.6	77.0	75.0	72.5	68.0	58.0	48.0	43.0	63.0
1876	44.9	48.9	58.8	68.0	77.0	80.0	78.0	74.0	68.0	58.0	48.0	43.0	63.0
1878	49.8	37.4	48.4	58.0	68.0	77.0	80.0	78.0	74.0	68.0	58.0	48.0	63.0
1879	35.5	48.0	50.2	62.4	75.1	79.4	80.9	77.2	69.7	58.9	44.3	35.9	60.9
1880	49.0	48.0	50.2	62.4	75.1	79.4	80.9	77.2	69.7	58.9	44.3	35.9	60.9
1881	35.2	42.5	45.8	54.9	68.8	75.3	80.5	78.8	77.8	66.4	50.9	45.8	60.2
1882	39.8	47.6	50.9	58.6	64.1	78.0	76.1	74.6	70.2	62.9	45.7	35.9	58.7
1883	35.9	47.1	43.8	56.3	67.2	75.1	79.1	76.4	68.6	60.8	51.8	44.8	58.9
1884	36.0	49.6	51.4	56.5	69.2	72.5	76.7	75.6	73.2	65.2	50.9	43.2	60.0
1885	39.2	36.0	42.9	58.6	67.2	75.7	79.6	75.7	68.0	58.3	48.0	42.6	63.0
1886	33.4	38.6	49.0	59.6	67.8	75.3	76.9	75.9	75.9	58.7	49.1	36.7	58.1
1887	39.1	48.1	43.7	58.3	70.7	77.0	80.0	78.0	74.0	68.0	58.0	48.0	63.0
1888	39.4	47.2	47.3	60.4	67.0	77.6	80.0	78.0	74.0	68.0	58.0	48.0	63.0
1889	46.6	37.9	47.4	58.9	68.8	77.0	80.0	78.0	74.0	68.0	58.0	48.0	63.0
1890	50.7	50.6	48.9	59.9	69.4	79.1	80.0	78.0	74.0	68.0	58.0	48.0	63.0
1891	41.5	48.9	44.5	60.9	66.2	77.5	76.8	77.8	73.4	56.4	47.0	46.8	59.8
1892	35.9	42.6	45.4	57.0	69.2	78.0	78.9	82.0	71.2	59.8	47.1	39.1	58.8
1893	30.0	42.2	48.0	62.0	67.4	76.0	82.2	77.6	70.7	59.2	48.2	43.4	58.9
1894	42.6	43.0	55.7	58.0	69.4	74.8	79.2	75.5	72.8	59.2	46.8	41.9	59.9
1895	37.6	31.2	48.4	57.4	65.1	76.8	76.4	78.1	76.4	57.0	50.0	42.6	58.1
1896	38.2	41.8	46.4	63.8	73.9	75.8	79.8	80.0	71.6	57.7	55.0	39.0	60.2
1897	35.7	43.3	51.0	58.4	64.8	77.0	78.2	76.8	71.6	62.4	51.2	42.7	59.4
1898	42.6	36.0	54.7	56.6	70.0	76.2	79.8	78.7	73.5	61.4	47.0	41.8	59.9
1899	38.8	34.6	49.6	56.7	69.4	77.8	78.6	79.8	71.6	61.5	51.4	40.8	59.2
1900	40.6	39.2	46.4	58.0	69.2	77.6	81.2	83.6	76.7	65.4	51.8	41.4	60.9



Average Temperature - Chapel Hill, N. C.  
Continued

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1901	40.0	37.9	50.6	52.8	68.0	76.4	81.2	80.4	70.6	60.2	43.6	38.8	58.4
1902	37.6	34.2	50.6	56.9	71.2	76.7	83.7	78.6	70.6	62.8	56.2	40.6	60.0
1903	40.0	42.3	56.7	59.2	69.0	72.0	-----	-----	71.4	59.8	47.2	37.7	-----
1904	34.9	36.0	50.0	53.8	-----	-----	-----	-----	-----	-----	46.6	38.0	-----
1905	36.4	33.1	52.4	58.6	70.0	76.0	78.8	78.4	72.4	61.2	50.2	40.4	59.0
1906	43.7	40.8	44.0	61.6	67.2	-----	-----	-----	-----	58.0	51.4	42.8	-----
1907	46.4	37.8	54.9	51.5	66.0	71.8	-----	-----	72.4	56.8	48.0	43.2	-----
1908	39.4	-----	-----	-----	-----	-----	-----	-----	-----	60.6	53.0	44.9	-----
1909	46.8	50.8	49.3	61.8	67.1	78.0	76.0	75.4	69.4	59.0	55.6	39.5	60.7
1910	43.2	41.5	58.0	60.8	66.4	-----	-----	-----	73.0	63.4	46.0	38.0	-----
1911	46.6	46.5	49.0	55.5	70.8	-----	-----	-----	75.5	63.8	48.3	49.0	-----
1912	33.9	38.7	49.0	61.4	69.2	74.4	78.9	-----	75.0	62.1	51.0	48.7	-----
1913	50.4	44.4	54.1	58.8	68.5	-----	79.6	75.8	69.0	61.0	51.1	-----	-----
1914	-----	39.0	-----	60.2	68.4	78.6	77.6	-----	-----	62.4	50.2	38.9	-----
1915	41.6	46.0	43.4	62.3	68.4	-----	77.6	-----	73.4	63.4	52.0	40.1	-----
1916	47.5	44.0	50.6	58.7	71.0	72.5	76.1	77.0	70.4	62.2	51.1	41.8	60.2
1917	44.0	-----	49.5	60.5	64.4	73.4	-----	-----	-----	57.8	49.0	-----	-----
1918	-----	-----	-----	56.0	71.9	74.5	74.7	-----	-----	64.3	50.6	46.3	-----
1919	44.0	42.1	53.4	59.5	69.0	74.6	78.1	77.4	-----	-----	51.2	39.5	-----
1920	41.6	38.4	51.2	55.8	62.5	75.2	76.4	-----	-----	-----	-----	-----	-----
1921	41.2	45.2	60.6	62.9	65.8	76.4	80.2	78.8	80.2	62.1	54.3	46.2	62.9
1922	40.0	50.2	52.7	63.2	68.8	77.1	79.6	75.9	74.9	63.6	51.8	46.6	62.0
1923	46.2	42.6	53.1	59.4	67.1	-----	79.4	79.0	73.4	60.7	49.8	50.2	-----
1924	41.2	41.2	49.0	58.8	66.6	76.6	76.8	78.7	68.4	60.4	52.8	43.0	59.5
1925	38.8	-----	53.2	62.0	65.6	79.4	81.2	76.7	78.0	59.4	49.0	42.5	-----
1926	40.6	46.8	45.8	58.4	68.9	73.2	79.5	80.3	74.3	64.0	48.6	43.7	60.3
1927	41.8	51.6	53.0	57.9	68.9	72.6	77.2	74.0	72.3	62.4	55.5	45.2	61.1
1928	42.8	43.4	51.4	56.7	66.0	74.9	79.6	79.3	67.8	64.0	52.2	43.9	60.2
1929	42.8	41.0	56.0	62.9	68.4	75.2	77.4	76.7	71.7	59.3	53.1	44.3	60.7
1930	45.0	49.8	48.6	60.6	71.6	74.9	81.2	76.8	77.4	59.0	49.0	38.0	61.0
1931	42.4	46.6	46.0	57.8	66.8	76.6	81.6	76.0	76.2	64.4	55.2	50.4	61.7
1932	51.4	51.0	48.8	59.6	68.2	77.6	82.1	79.6	73.6	62.6	49.8	46.9	62.6
1933	50.1	45.0	52.2	60.3	73.6	78.7	78.8	78.2	77.8	63.0	50.8	49.0	63.1
1934	46.2	36.4	49.2	62.0	69.2	79.2	81.6	78.8	74.1	60.8	54.4	43.5	61.3
1935	42.2	45.1	58.0	58.7	67.0	77.4	79.6	79.1	71.4	62.5	54.4	36.0	61.0
1936	37.2	39.4	54.8	57.8	71.9	76.3	80.0	80.6	75.4	65.0	51.5	45.5	61.3
1937	51.8	45.0	50.6	60.8	69.8	78.6	79.0	79.0	69.8	59.6	50.3	43.2	61.5
1938	42.5	50.4	58.1	61.9	69.9	74.0	77.6	80.6	72.8	61.8	55.9	44.6	62.5
1939	46.0	50.8	55.3	60.4	69.2	79.6	77.9	79.0	75.6	64.4	49.3	45.0	62.7
1940	30.0	42.5	47.5	58.1	67.4	77.2	78.2	77.8	70.7	61.2	50.9	44.6	58.8
1941	41.6	39.1	46.2	63.4	71.5	76.0	79.8	79.6	76.7	70.0	53.5	47.0	62.0
1942	41.1	41.0	54.0	63.0	70.1	78.0	80.2	77.4	74.0	62.7	54.0	41.8	61.4
1943	44.4	46.8	50.8	59.6	71.2	80.2	78.8	80.0	70.0	61.4	51.6	41.2	61.3
1944	42.8	46.8	50.3	60.8	73.8	78.8	78.4	76.8	74.1	61.9	51.0	39.2	61.2
1945	40.6	45.8	62.4	65.1	67.6	79.3	79.0	76.8	75.2	61.2	54.4	37.4	62.0
Averages													
*25 yrs	42.8	45.1	52.3	60.6	69.0	77.0	79.4	78.2	73.8	62.3	52.1	44.0	61.4
Record	41.2	43.6	50.4	59.3	68.3	76.0	78.8	77.4	71.3	60.8	50.6	42.6	60.3

\* Period of 1921-45



Highest Temperature - Chapel Hill, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1883	61	77	74	85	91	96	102	101	94	92	83	71	102
1884	61	76	80	88	94	98	100	99	99	100	79	78	100
1885	77	68	75	94	90	94	100	---	---	---	---	---	---
1886	63	67	80	93	93	93	98	96	94	89	77	64	98
1887	72	79	83	91	93	---	---	---	98	92	76	68	---
1888	75	72	78	94	96	100	---	---	90	80	84	69	---
1889	70	68	74	90	97	---	---	---	---	86	81	76	---
1890	77	78	79	88	96	102	---	---	94	88	85	71	---
1891	69	76	70	88	95	99	97	97	94	92	80	74	99
1892	68	68	75	84	95	102	103	105	93	90	81	68	105
1893	66	72	77	93	96	95	104	98	93	88	79	72	104
1894	68	72	88	86	93	104	98	96	96	86	75	70	104
1895	68	73	85	85	98	101	98	98	102	83	79	72	102
1896	66	69	77	97	98	97	99	102	99	79	79	68	102
1897	69	76	81	88	87	100	101	95	101	90	78	70	101
1898	73	71	88	86	94	99	99	96	91	87	74	69	99
1899	70	71	74	86	92	100	96	100	102	84	77	69	102
1900	69	70	74	86	95	98	107	104	100	89	82	68	107
1901	73	72	75	85	92	100	99	98	92	84	79	72	100
1902	68	70	78	87	93	99	107	105	95	84	81	69	107
1903	67	73	79	86	96	93	---	---	91	88	81	59	---
1904	68	76	---	83	---	---	---	---	---	---	72	70	---
1905	67	56	80	88	90	93	98	100	94	89	77	63	100
1906	74	72	72	90	94	---	---	---	---	82	78	72	---
1907	80	66	92	84	91	95	---	---	92	84	77	68	---
1908	64	---	---	---	---	---	---	---	---	86	79	75	---
1909	78	77	79	90	90	95	94	96	90	83	79	72	96
1910	74	72	89	88	91	---	---	---	94	88	73	67	---
1911	78	76	78	84	97	---	---	---	93	95	73	73	---
1912	63	68	84	84	91	94	97	103	96	93	84	79	103
1913	75	75	83	88	95	---	101	93	93	85	77	68	---
1914	73	66	---	89	95	100	99	---	88	84	78	65	---
1915	67	70	67	92	90	---	97	---	92	85	78	70	---
1916	75	71	82	89	95	89	88	94	95	87	77	72	95
1917	71	79	74	90	91	94	---	---	---	83	72	---	---
1918	---	---	---	85	94	98	95	---	---	85	75	74	---
1919	70	70	75	87	90	94	96	93	---	---	74	70	---
1920	70	67	81	88	85	95	93	---	---	82	74	65	---
1921	72	73	86	88	91	98	99	101	101	89	80	73	101
1922	78	82	84	92	88	93	97	96	97	92	79	73	97
1923	70	71	81	85	87	---	98	98	95	83	74	76	---
1924	68	71	78	92	90	101	95	100	96	87	81	79	101
1925	66	---	86	95	96	98	99	101	101	89	71	68	---
1926	70	74	81	89	95	100	103	98	94	94	77	71	103
1927	71	78	85	82	94	99	97	92	97	89	80	79	99
1928	76	68	79	80	93	96	97	97	93	85	79	67	97
1929	72	68	90	92	89	101	96	93	92	83	82	76	101
1930	77	85	76	94	93	98	100	101	100	86	79	68	101
1931	71	72	69	87	90	99	100	96	98	92	79	79	100
1932	77	82	79	85	93	95	103	106	104	82	77	72	106
1933	75	75	83	84	95	104	99	96	97	91	84	73	104
1934	72	70	80	88	93	99	99	95	91	84	81	69	99
1935	75	75	86	87	89	100	99	101	94	87	78	66	101

Highest Temperature - Chapel Hill, N. C.  
Continued

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1936	68	79	85	89	96	101	99	98	97	86	81	71	101
1937	79	76	77	90	95	98	100	95	93	89	76	71	100
1938	68	79	85	87	95	93	95	98	94	90	80	70	98
1939	74	78	85	88	93	96	95	94	100	93	76	75	100
1940	60	70	77	84	96	96	106	97	94	88	80	75	106
1941	69	61	72	92	100	95	98	100	100	97	76	72	100
1942	70	64	79	90	91	95	98	98	95	82	79	73	98
1943	77	76	81	88	90	98	94	102	92	87	79	77	102
1944	79	76	85	89	94	101	95	94	96	89	75	65	101
1945	61	74	92	90	89	104	90	93	92	83	85	61	104

Lowest Temperature - Chapel Hill, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1883	9	25	26	32	40	55	60	53	49	42	17	20	9
1884	0	16	16	35	43	41	56	56	49	30	26	7	0
1885	14	9	17	29	50	63	61	--	--	--	--	--	--
1886	2	3	24	33	46	54	62	55	52	35	24	15	2
1887	8	22	26	28	45	--	--	--	36	34	25	14	--
1888	16	14	20	34	43	50	--	--	35	33	29	20	--
1889	20	10	27	33	38	--	--	--	--	34	23	23	--
1890	23	29	19	29	44	59	--	--	52	32	26	20	--
1891	21	22	21	30	34	55	55	55	49	28	13	19	13
1892	14	14	22	27	42	50	52	60	44	30	19	6	6
1893	-1	21	22	36	44	55	60	59	42	29	17	19	-1
1894	24	17	19	33	35	50	59	56	51	34	21	8	8
1895	4	1	24	29	38	49	56	55	35	31	22	18	1
1896	14	7	23	31	47	56	62	52	40	32	29	11	7
1897	7	22	28	31	40	55	60	60	43	38	20	18	7
1898	14	11	24	28	39	51	60	65	49	35	22	11	11
1899	13	-6	15	29	44	53	52	64	42	36	30	10	-6
1900	9	10	22	28	42	54	58	62	49	36	29	19	9
1901	20	11	13	35	50	56	65	64	49	34	20	9	9
1902	14	15	19	31	42	53	62	56	44	34	30	14	14
1903	17	15	27	29	44	46	--	--	43	30	15	14	--
1904	11	12	24	30	--	--	--	--	--	--	26	18	--
1905	11	6	28	30	47	52	60	56	47	32	24	18	6



Lowest Temperature - Chapel Hill, N. C.  
Continued

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1906	19	14	22	33	34	--	--	--	--	26	24	15	--
1907	13	14	28	26	39	50	--	--	47	31	26	21	--
1908	16	--	--	--	--	--	--	--	--	37	28	21	--
1909	14	16	26	30	38	59	52	53	46	33	22	10	10
1910	15	15	24	34	38	--	--	--	48	26	24	15	--
1911	21	19	22	32	39	--	--	--	50	42	21	21	--
1912	5	14	22	32	44	45	60	51	52	35	18	18	5
1913	20	16	23	33	38	--	54	58	45	31	23	20	--
1914	--	14	18	31	42	56	53	--	45	28	13	13	--
1915	19	21	25	27	50	--	57	--	44	34	26	20	--
1916	14	13	20	32	47	55	61	58	48	38	19	16	13
1917	13	3	22	31	37	50	--	--	--	26	20	--	--
1918	--	--	--	30	41	51	52	--	--	37	28	21	--
1919	10	18	30	25	45	52	50	57	--	--	24	15	--
1920	9	13	13	88	85	95	93	--	--	36	19	--	--
1921	15	21	30	34	39	48	61	53	63	32	24	24	15
1922	16	12	27	34	42	60	59	50	52	37	22	20	12
1923	22	16	21	20	34	--	58	53	49	39	25	23	--
1924	7	18	24	27	43	54	58	55	47	32	25	9	7
1925	15	--	15	29	40	55	59	55	55	30	22	8	--
1926	14	20	10	28	40	52	55	63	52	31	23	12	10
1927	6	27	19	32	41	53	57	53	46	38	27	16	6
1928	7	21	29	30	42	51	62	62	41	35	18	21	7
1929	18	18	22	35	45	46	56	43	43	32	12	9	9
1930	14	20	20	32	42	46	62	54	50	31	15	14	14
1931	12	24	23	33	39	49	65	54	43	38	28	27	12
1932	27	27	17	33	44	55	56	58	50	36	21	18	17
1933	13	14	23	38	49	47	54	60	50	33	18	15	13
1934	6	8	19	33	46	60	66	54	53	31	26	19	6
1935	7	16	25	34	43	53	60	55	45	34	24	8	7
1936	6	6	31	28	44	52	58	62	48	32	20	23	6
1937	34	20	16	32	37	59	57	60	48	32	20	17	16
1938	14	29	26	33	49	48	60	60	46	38	19	22	14
1939	20	18	25	33	35	64	62	61	52	32	25	23	18
1940	3	17	20	29	40	56	57	59	43	33	24	19	3
1941	18	21	22	41	40	56	66	52	51	40	25	23	18
1942	7	16	32	30	49	59	65	53	40	33	26	10	7
1943	18	11	13	28	41	65	59	55	44	33	26	12	11
1944	15	14	24	29	43	55	59	57	52	35	30	19	14
1945	--	13	35	35	40	52	60	54	58	34	23	13	--



Precipitation in Fayetteville, Cumberland County, North Carolina:  
Monthly and annual (in inches and hundredths)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1889	0.00	0.00	0.00	1.77	3.52	5.03	14.04	6.96	3.68	0.00	0.00	0.00	0.00
1890	0.00	0.00	0.00	0.00	0.00	2.08	7.52	5.79	3.12	0.00	0.00	0.00	0.00
1891	4.50	3.80	7.84	2.74	4.56	3.15	6.05	9.57	1.84	4.51	2.53	2.04	53.12
1892	7.57	2.99	3.04	1.99	4.79	3.75	10.32	4.64	2.44	.34	2.12	3.75	47.74
1893	3.15	4.60	2.08	1.63	7.67	5.77	3.39	7.36	5.10	4.73	2.39	3.44	51.31
1894	4.58	3.47	2.10	1.30	5.31	2.12	4.26	13.45	6.68	9.16	1.51	1.84	55.78
1895	7.67	2.41	6.07	9.21	4.12	1.89	5.61	6.56	2.47	2.50	2.21	2.30	53.02
1896	3.98	5.52	2.13	1.15	8.06	7.15	5.52	1.74	9.01	1.36	2.51	3.45	51.58
1897	1.31	3.63	4.05	2.77	5.88	2.94	11.11	5.41	1.42	2.17	3.43	2.13	46.25
1898	2.19	1.02	2.93	4.75	1.59	5.53	5.97	7.46	2.43	2.70	4.95	2.86	44.38
1899	3.60	10.10	5.32	3.40	2.35	4.03	8.35	3.76	5.29	3.81	1.90	2.76	54.67
1900	1.86	3.75	3.52	3.51	2.53	6.47	2.56	1.26	2.77	1.26	3.52	4.89	37.90
1901	2.62	1.91	3.78	3.46	7.98	4.31	7.81	7.80	5.47	1.21	.73	5.34	52.42
1902	2.20	6.18	2.44	2.75	1.84	2.37	2.50	2.80	5.24	2.00	3.28	3.78	37.38
1903	5.08	5.21	8.79	3.39	2.55	4.42	3.21	5.51	1.98	3.93	.67	2.28	47.02
1904	2.80	4.46	3.89	.53	2.74	4.66	8.02	8.41	3.89	2.97	4.17	2.88	49.42
1905	2.44	5.46	2.86	3.01	6.06	1.86	7.36	6.63	7.37	2.55	.53	5.78	51.91
1906	4.05	5.69	3.90	1.25	2.24	5.94	9.19	7.14	2.22	3.16	.70	3.69	49.07
1907	.40	3.72	1.91	4.89	4.13	6.95	5.34	8.33	4.64	1.03	3.52	5.26	50.12
1908	3.07	4.90	6.12	3.21	3.47	6.28	6.25	13.54	2.03	2.78	1.16	3.60	56.41
1909	.96	3.61	1.80	1.80	5.18	5.31	3.65	6.86	2.91	.85	.21	1.38	34.52
1910	3.62	3.96	1.20	4.13	5.50	9.97	4.47	5.55	2.47	3.20	.79	2.57	47.43
1911	1.69	.88	3.90	2.40	.66	2.80	2.59	6.76	1.98	3.29	4.06	4.53	35.63
1912	3.88	3.59	6.59	4.25	5.52	6.06	5.25	2.64	4.54	1.51	2.94	2.41	49.18
1913	3.52	3.37	5.10	1.55	2.66	9.39	4.92	2.72	5.47	5.59	1.12	5.07	50.48
1914	2.72	4.59	2.28	2.42	2.02	3.71	3.00	5.41	5.09	2.26	2.59	3.32	39.41
1915	6.06	2.79	2.70	3.04	6.35	6.92	3.38	5.90	5.43	3.92	1.37	1.53	49.39
1916	3.27	2.99	2.03	2.12	6.66	6.73	7.78	4.20	1.03	3.32	.71	2.79	43.63
1917	3.52	3.48	2.98	1.49	4.58	8.88	8.47	1.62	7.41	1.22	1.17	1.60	46.42
1918	2.59	.90	1.11	7.37	5.65	2.87	6.49	1.53	4.77	.70	2.43	4.19	40.60
1919	3.27	2.64	2.86	2.50	4.57	4.31	8.92	2.92	1.57	5.22	.12	1.14	40.04
1920	2.74	3.86	3.97	6.59	.84	6.79	9.17	7.67	4.09	.67	6.33	5.56	58.28
1921	3.69	5.03	5.09	4.49	5.54	4.59	6.40	1.14	2.03	1.65	2.86	2.03	44.54
1922	3.87	6.77	6.02	3.63	3.76	9.40	9.36	9.02	.82	5.14	.91	5.80	64.50
1923	2.99	3.04	4.32	5.70	2.37	2.43	6.70	2.48	5.66	1.37	1.92	1.87	40.85
1924	4.03	4.65	1.77	4.48	6.43	6.05	4.12	2.96	13.39	.72	1.20	3.71	53.51
1925	7.36	2.04	1.94	2.72	4.64	5.64	5.45	4.36	2.09	3.37	2.64	2.51	44.76
1926	4.65	5.24	3.73	2.73	.71	4.39	3.88	4.40	1.48	.37	2.98	2.32	36.88
1927	.87	2.02	4.66	1.51	2.59	5.20	9.84	6.36	1.26	4.22	2.98	6.01	47.52
1928	1.03	5.44	3.22	6.59	4.23	6.13	5.78	9.51	12.64	1.86	1.33	2.04	59.80
1929	4.36	6.64	6.11	4.10	4.48	5.22	4.57	7.58	3.50	9.62	4.54	3.29	64.01
1930	3.62	1.57	2.46	2.31	5.38	5.39	2.64	5.65	1.93	3.38	2.46	3.57	40.36
1931	2.31	1.22	2.62	5.02	4.30	1.92	8.91	12.78	0.94	0.67	0.42	6.15	47.14
1932	2.58	3.44	3.18	2.22	8.01	2.99	3.32	4.51	2.77	3.21	6.96	4.64	47.83
1933	3.44	4.85	1.87	5.06	5.52	1.42	9.08	3.69	4.05	0.04	0.77	0.25	40.04
1934	1.49	3.36	5.08	2.92	3.87	3.02	5.69	3.33	3.11	0.82	5.01	2.20	39.90
1935	2.87	3.37	2.95	2.24	2.40	1.59	3.48	4.36	8.24	1.05	2.77	3.07	33.39



Precipitation in Fayetteville, Cumberland County, North Carolina:  
Monthly and annual (in inches and hundredths) continued-

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1936	4.62	4.85	6.20	6.09	1.12	5.75	9.84	11.70	5.61	5.37	3.19	4.78	69.12
1937	6.38	4.57	2.24	5.36	0.55	3.13	3.20	7.76	1.16	1.36	2.47	1.84	40.02
1938	1.99	0.60	1.72	6.81	3.60	5.67	6.50	2.56	8.09	1.59	2.70	2.74	44.57
1939	3.54	7.41	3.05	4.55	3.16	5.91	9.92	5.64	3.63	1.80	1.76	2.27	52.53
1940	3.90	2.68	3.27	3.68	3.60	3.52	3.52	6.90	2.24	0.22	2.57	2.69	38.79
1941	1.63	2.76	4.78	4.70	0.85	7.16	7.38	3.25	1.14	1.40	1.32	3.26	39.63
1942	2.13	2.85	7.23	1.55	2.79	4.61	4.59	16.02	2.73	1.99	0.62	3.76	50.87
1943	3.91	0.85	6.20	2.72	2.82	3.00	13.35	2.80	2.97	0.27	1.90	4.19	44.98
1944	5.03	6.48	6.41	4.36	3.90	1.45	4.85	2.95	3.01	2.99	1.41	2.47	45.91
1945	1.15	3.90	1.85	2.53	1.41	4.63	5.54	2.26	8.69	2.04	0.53	5.46	39.99
Averages													
*25 yrs	3.34	3.79	3.92	3.99	3.52	4.41	6.32	5.76	4.13	2.26	2.33	3.32	46.86
Record	3.35	3.82	3.77	3.47	3.92	4.75	6.32	5.82	4.02	2.55	2.25	3.29	47.20

\*Period of 1921-45

Average Temperature - Fayetteville, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1871	----	----	57.7	64.0	68.3	78.6	81.0	78.2	68.0	64.9	50.4	42.8	----
1872	39.3	42.4	45.3	61.5	71.3	75.4	81.3	78.2	73.4	59.2	47.5	36.8	59.3
1873	----	----	----	61.9	69.3	77.0	82.5	78.8	71.0	63.8	52.6	45.4	----
1878	39.9	44.7	57.8	62.0	68.3	72.5	----	----	70.0	59.4	49.8	39.0	----
1879	42.2	40.4	55.2	57.8	68.1	74.5	78.8	74.5	67.6	64.6	50.4	50.0	60.3
1880	50.4	----	53.7	----	73.4	83.2	----	80.7	----	----	----	----	----
1882	43.7	50.3	55.5	61.0	66.7	76.0	76.8	74.4	71.2	61.8	44.8	40.7	60.2
1883	----	50.0	46.3	----	----	----	----	----	----	----	----	----	----
1884	40.5	51.5	57.4	60.6	74.3	73.3	----	----	----	----	----	----	----
1889	----	----	----	59.4	75.0	74.3	76.9	73.0	67.4	----	----	----	----
1890	----	----	----	----	----	82.4	79.4	76.5	73.2	----	----	----	----
1894	----	----	----	----	----	----	----	----	----	----	----	----	----
1895	----	34.2	51.2	59.6	66.4	77.3	77.8	78.0	76.0	58.4	53.2	44.3	----
1896	41.0	45.6	51.0	65.0	74.6	75.3	79.6	78.7	72.3	60.4	57.0	41.4	61.8
1897	39.6	47.8	54.0	59.4	67.5	76.8	79.0	76.6	72.0	63.1	53.0	45.2	61.2
1898	47.4	42.4	57.1	56.6	70.8	76.7	78.6	78.2	74.2	63.0	50.4	44.8	61.7
1899	42.8	39.8	54.8	58.6	70.0	77.4	77.3	79.4	71.6	63.2	53.0	43.4	60.9
1900	44.0	43.4	50.6	61.2	69.3	75.5	80.7	83.5	77.0	66.8	54.6	43.6	62.5



**Average Temperature - Fayetteville, N. C.**  
Continued

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1901	43.2	41.0	53.6	55.4	70.2	75.8	80.1	78.3	72.6	62.6	47.0	43.8	60.3
1902	40.6	39.0	53.6	59.3	71.5	77.4	80.4	77.4	71.9	64.3	57.5	44.2	61.5
1903	43.6	48.8	60.7	60.6	70.2	72.8	79.2	78.6	71.3	61.2	49.6	39.4	61.3
1904	39.0	41.4	55.1	58.5	68.4	75.3	77.8	76.7	72.0	60.1	50.4	42.6	59.8
1905	40.2	37.1	57.0	60.5	72.0	76.2	78.8	76.5	73.4	62.4	53.8	44.7	61.0
1906	48.6	44.6	49.8	46.3	69.1	76.8	76.8	78.0	74.6	61.6	54.1	47.2	62.1
1907	51.4	41.8	59.6	54.3	67.8	72.4	79.4	77.4	73.3	58.2	51.4	46.0	61.1
1908	42.0	41.8	60.2	65.8	70.8	75.9	79.3	77.4	70.8	61.6	55.0	47.6	62.4
1909	48.2	51.4	51.6	63.4	68.9	79.1	77.2	76.9	70.8	60.2	57.3	41.3	62.2
1910	44.0	44.4	59.4	63.3	68.9	74.6	79.2	77.8	75.1	66.1	49.4	40.6	61.9
1911	48.8	48.7	51.6	60.0	72.2	79.8	80.0	81.2	78.6	65.4	50.5	48.2	63.8
1912	---	---	---	63.6	71.4	---	79.3	78.8	77.4	---	---	---	---
1913	53.8	47.2	57.8	61.3	71.4	75.3	81.6	78.2	71.2	63.6	52.5	46.6	63.4
1914	46.3	42.2	48.0	62.0	71.8	79.4	80.2	79.6	70.4	64.3	52.1	42.2	61.5
1915	43.8	48.5	44.8	62.7	70.6	74.3	80.6	78.7	75.1	64.9	54.2	42.1	61.7
1916	50.6	46.5	52.3	60.6	72.3	74.8	77.8	78.8	71.0	63.9	54.2	44.8	62.3
1917	48.3	46.2	53.0	63.2	66.1	75.9	79.3	78.1	69.2	59.4	48.7	36.0	60.3
1918	36.0	51.4	58.6	60.2	72.9	75.4	76.4	80.3	68.7	67.0	50.6	49.0	62.2
1919	47.1	44.3	55.2	61.1	70.6	75.3	78.4	78.0	73.0	71.8	54.8	45.0	62.9
1920	43.0	41.6	52.0	60.4	65.6	76.4	77.4	77.0	75.0	63.2	53.4	45.8	60.9
1921	45.2	48.0	62.1	63.5	67.2	77.2	78.8	77.7	80.0	63.0	56.3	48.0	63.9
1922	42.0	51.0	55.4	63.6	70.8	76.8	78.8	75.1	73.6	63.4	53.3	49.4	62.8
1923	47.0	44.0	56.0	60.5	67.8	77.0	77.5	78.2	73.3	60.7	51.0	52.5	62.1
1924	43.0	43.2	51.1	60.8	68.4	76.6	77.2	79.1	70.0	61.1	54.1	47.2	61.0
1925	44.0	53.6	56.2	65.0	66.8	78.5	80.4	77.2	79.3	62.4	51.0	43.8	63.2
1926	43.9	49.2	48.2	60.4	70.2	76.4	80.6	81.0	76.6	66.0	51.0	46.6	62.5
1927	45.0	55.4	54.8	62.7	71.4	74.2	77.7	74.8	74.4	65.0	57.6	47.0	63.3
1928	45.4	45.8	53.4	60.0	66.6	77.2	79.4	79.2	70.6	66.6	53.8	46.1	62.0
1929	46.8	44.0	57.4	63.9	69.3	73.9	77.8	76.5	72.0	61.0	54.8	46.2	62.0
1930	47.0	52.0	51.4	63.6	71.4	75.0	81.0	75.7	77.0	60.4	51.6	42.0	62.3
1931	44.0	48.0	49.0	60.6	69.8	78.6	83.3	78.7	78.7	65.6	58.5	54.0	64.1
1932	55.2	53.6	51.4	62.4	69.8	79.3	83.8	79.5	74.2	65.4	52.0	49.8	64.7
1933	51.8	49.3	54.8	62.2	75.2	78.9	78.2	78.7	78.6	64.5	51.1	50.8	64.5
1934	48.2	39.6	51.5	63.4	69.0	79.0	81.4	80.0	76.0	62.2	55.6	44.6	62.5
1935	44.6	47.6	59.6	61.3	68.8	79.0	80.4	80.4	73.6	63.4	57.6	37.2	62.8
1936	40.0	41.6	56.4	61.2	72.2	76.4	81.2	81.0	76.2	66.2	52.4	48.2	62.8
1937	55.4	46.0	51.0	61.9	71.0	80.5	81.2	80.4	71.6	61.4	48.4	44.2	62.8
1938	43.6	51.9	57.8	61.8	71.9	75.2	79.5	81.6	74.2	61.9	58.0	45.7	63.6
1939	47.8	53.2	57.4	52.6	70.2	81.6	80.0	80.1	76.7	66.0	49.9	46.3	63.5
1940	34.6	46.6	51.2	60.6	70.4	79.8	81.0	80.2	72.8	63.1	54.2	50.2	62.1
1941	44.0	41.0	48.4	64.9	72.6	79.2	82.6	81.2	78.0	69.8	54.8	47.5	63.7
1942	44.5	40.9	55.0	65.1	72.0	80.1	82.8	78.1	77.2	63.9	56.4	42.8	63.2
1943	48.5	46.9	54.0	60.4	73.6	82.8	80.8	80.2	72.6	61.4	51.8	45.2	63.2
1944	43.9	49.8	51.8	63.8	74.6	81.5	79.8	78.7	75.6	61.6	53.4	39.7	62.8
1945	44.3	46.6	64.2	67.2	66.1	79.0	80.2	---	77.0	63.2	---	39.7	---
<b>Averages</b>													
*25 yrs	45.6	47.6	54.4	62.1	70.3	78.1	80.2	78.9	75.2	63.6	53.7	46.2	63.0
Record	45.4	46.3	54.6	61.2	70.2	77.2	79.7	78.5	74.1	63.4	53.1	45.3	61.0

\*Period of 1921-45



Highest Temperature - Fayetteville, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1880	88	88	88	88	88	88	108	88	88	88	88	88	88
1889	88	88	88	90	98	88	88	88	88	88	88	88	88
1890	88	88	88	88	88	101	100	95	90	88	88	88	88
1891													
1892													
1893													
1894													
1895	88	64	84	85	96	98	94	92	93	84	78	73	98
1896	64	71	79	91	95	92	99	101	97	82	83	68	101
1897	70	79	84	87	91	98	99	95	98	89	78	72	99
1898	78	77	89	88	98	99	96	96	93	90	77	71	99
1899	75	77	80	89	94	97	95	96	98	87	77	72	98
1900	71	76	75	88	93	92	101	102	99	90	85	74	102
1901	79	76	78	83	95	94	96	91	94	86	80	76	96
1902	71	73	82	88	94	97	101	98	95	86	82	71	101
1903	69	73	83	87	95	92	96	97	90	88	81	65	97
1904	73	78	84	85	91	96	95	95	90	89	74	75	96
1905	71	62	85	89	92	95	98	98	92	88	79	71	98
1906	78	75	80	89	94	96	93	92	91	85	80	74	96
1907	81	72	97	85	90	91	96	93	90	80	77	70	97
1908	67	67	87	90	94	95	97	95	90	87	82	78	97
1909	81	78	84	90	92	95	96	97	91	85	80	74	97
1910	75	78	90	93	93	94	95	95	95	91	75	69	95
1911	78	79	80	90	98	102	98	100	97	93	75	77	102
1912	88	88	88	88	95	88	95	97	100	88	88	88	88
1913	74	76	82	88	96	97	101	95	92	88	80	74	101
1914	78	71	83	92	100	102	103	98	94	87	81	70	103
1915	67	74	76	92	95	95	101	96	96	86	85	74	101
1916	78	77	85	92	97	92	93	96	94	89	84	78	97
1917	77	79	80	94	95	93	98	97	93	85	76	68	98
1918	67	81	87	88	95	101	99	100	92	88	81	77	101
1919	73	72	77	90	90	96	97	96	95	97	79	80	97
1920	75	65	83	91	88	98	94	95	94	87	80	69	98
1921	77	77	88	89	91	98	94	98	98	85	82	74	98
1922	79	80	84	93	91	95	94	90	90	88	78	74	95
1923	74	78	84	90	86	95	95	94	90	83	73	74	95
1924	71	69	81	88	90	98	95	96	96	87	83	79	98
1925	71	78	87	95	95	95	98	98	99	90	77	69	99
1926	69	71	81	87	98	102	104	96	93	92	79	72	104
1927	78	82	87	92	97	97	94	95	96	90	82	81	97
1928	80	71	80	81	90	100	96	94	90	88	79	69	100
1929	77	75	89	94	89	94	94	94	89	82	83	76	94
1930	79	52	78	96	90	97	99	97	95	85	82	70	99
1931	72	75	75	87	94	105	106	97	106	95	86	86	106
1932	80	82	83	90	97	100	107	105	103	87	79	79	107
1933	77	77	86	89	98	105	98	98	98	95	84	77	105
1934	80	70	82	90	95	100	100	100	95	88	84	70	100
1935	79	75	90	87	95	99	101	103	95	89	83	71	103
1936	72	79	87	87	97	101	102	98	96	88	86	73	102
1937	80	79	80	91	98	99	103	95	94	94	78	73	103
1938	73	79	82	87	100	93	97	102	98	91	85	72	102
1939	76	80	87	90	96	100	96	96	104	94	79	74	104
1940	65	70	80	87	99	100	106	98	96	92	83	77	106

Highest Temperature - Fayetteville, N. C.  
Continued

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1941	73	67	74	94	102	100	103	102	101	98	81	78	103
1942	73	68	82	92	92	98	103	101	99	87	83	78	103
1943	80	79	82	92	95	104	99	101	98	88	81	82	104
1944	77	79	87	87	96	102	99	99	100	86	77	75	102
1945	70	81	91	90	94	101	97	--	94	85	81	65	101

Lowest Temperature - Fayetteville, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1880	25	--	--	--	--	--	74	--	--	--	--	--	--
1889	--	--	--	44	52	--	--	--	--	--	--	--	--
1890	--	--	--	--	--	62	54	51	54	--	--	--	--
1891													
1892													
1893													
1894													
1895	--	7	27	35	43	54	60	62	56	36	28	21	7
1896	17	8	25	36	44	57	63	54	39	33	26	14	8
1897	10	21	28	29	45	58	59	57	45	39	24	19	10
1898	14	13	26	32	42	53	58	64	52	33	22	11	11
1899	14	-5	20	30	44	55	54	62	43	38	31	9	-5
1900	12	11	23	30	44	54	59	62	52	34	28	20	11
1901	21	16	15	35	50	55	66	65	50	34	18	10	10
1902	15	16	21	31	46	53	61	54	45	34	29	16	15
1903	18	19	32	30	48	51	60	63	44	30	16	15	15
1904	9	17	27	28	45	50	63	55	44	35	26	22	9
1905	12	12	29	32	50	53	64	55	50	35	25	20	12
1906	20	15	24	34	39	60	63	70	58	28	23	17	15
1907	17	16	27	28	41	53	60	58	53	33	26	18	16
1908	16	15	25	31	37	56	61	57	45	39	26	25	15
1909	16	16	28	33	41	61	54	54	40	30	22	14	14
1910	16	16	28	33	41	61	54	54	40	30	22	14	14
1911	22	22	24	35	42	56	61	62	56	43	23	22	22
1912	8	15	25	35	48	50	65	56	58	37	23	20	8
1913	29	25	25	36	40	50	61	59	45	29	25	22	22
1914	20	18	20	32	44	57	56	56	44	30	19	15	15
1915	22	22	27	29	51	54	60	63	48	36	27	22	22
1916	16	13	21	34	47	55	61	62	45	37	22	19	13
1917	17	9	25	33	39	54	65	59	46	33	22	2	2
1918	4	18	27	32	41	53	55	57	43	38	29	19	4
1919	15	20	32	28	51	53	52	57	50	47	24	20	15
1920	10	18	17	31	41	54	55	63	52	34	24	24	10
1921	19	27	34	32	43	50	65	53	62	34	26	23	19
1922	19	16	30	37	45	60	63	55	55	40	23	25	16
1923	24	17	24	26	40	58	60	58	52	41	27	24	17
1924	8	22	25	30	45	57	61	60	48	34	26	18	8
1925	21	26	18	36	42	57	62	58	58	33	24	10	10



Lowest Temperature - Fayetteville, N. C.  
Continued

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1926	18	22	17	31	42	53	58	64	58	30	25	15	15
1927	10	29	21	34	45	56	59	57	48	42	28	18	10
1928	10	23	28	34	44	55	62	62	46	36	23	23	10
1929	21	21	23	39	46	48	59	56	46	38	17	14	14
1930	20	23	23	36	46	52	63	56	56	31	17	19	17
1931	17	22	23	33	42	50	67	57	46	32	28	27	17
1932	25	25	18	33	45	53	60	58	48	35	22	22	18
1933	25	13	25	35	50	44	51	60	47	31	17	16	13
1934	8	9	21	32	44	57	62	52	54	28	24	14	8
1935	10	17	21	33	43	51	61	55	47	32	22	9	9
1936	11	1	33	29	44	48	58	56	50	31	20	24	1
1937	36	21	18	33	40	58	59	59	49	30	16	18	16
1938	16	28	25	33	48	49	57	60	46	36	21	22	16
1939	20	20	29	30	38	67	62	60	50	34	26	23	20
1940	11	19	21	36	39	55	57	57	48	34	23	19	11
1941	19	21	22	35	36	56	67	58	49	37	23	23	19
1942	10	17	25	31	45	58	65	53	41	32	22	14	10
1943	17	12	15	27	40	67	60	56	42	32	24	9	9
1944	8	18	25	30	48	57	51	56	54	31	29	19	8
1945	20	16	30	38	39	50	60	56	60	35	--	10	10

**Precipitation at Reidsville, Rockingham County, North Carolina:  
Monthly and annual (in inches and hundredths)**

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1901	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89	5.73	0.00
1902	2.07	4.54	4.58	2.33	2.81	4.85	1.60	2.45	2.32	4.43	2.73	4.49	39.20
1903	4.38	6.59	6.56	5.01	1.86	8.39	3.41	2.60	3.45	2.24	2.10	2.03	48.62
1904	2.39	2.85	3.16	1.45	3.26	5.97	3.62	4.83	4.68	0.92	1.65	3.51	38.29
1905	3.14	4.78	1.89	4.59	8.20	2.43	7.28	5.42	.99	2.28	.51	7.50	49.01
1906	6.68	2.02	4.37	1.78	4.08	6.47	14.27	8.18	1.50	3.59	.53	2.88	56.35
1907	.34	2.54	2.40	5.00	1.69	7.70	4.55	4.12	6.19	1.10	5.51	5.11	46.25
1908	4.18	3.83	3.74	1.15	3.71	5.04	3.63	10.30	2.54	4.39	2.12	4.60	49.23
1909	1.69	3.25	2.94	1.75	6.34	4.00	3.19	8.34	3.01	1.85	.69	2.55	39.60
1910	4.05	2.54	1.84	4.41	2.38	7.21	4.56	2.39	3.15	4.37	1.09	2.97	40.96
1911	3.52	1.66	3.84	4.57	1.00	1.69	1.80	7.85	2.35	4.69	3.73	3.91	40.61
1912	2.60	4.01	9.79	3.85	3.02	4.63	2.02	1.56	4.83	1.51	3.23	1.37	42.42
1913	3.43	2.27	5.57	3.00	5.78	4.30	5.81	6.67	5.97	4.49	3.50	3.64	54.43
1914	2.55	4.33	3.38	3.79	1.85	1.51	3.12	1.21	1.61	3.53	2.29	7.23	36.40
1915	3.83	3.00	1.71	1.53	4.17	3.37	1.65	11.23	1.33	5.21	1.78	3.40	42.21
1916	1.27	4.72	1.64	2.26	6.99	6.68	5.53	4.98	1.69	2.43	.99	2.94	42.12
1917	4.31	2.09	7.36	2.19	3.00	3.34	4.17	3.27	4.89	2.75	1.06	2.49	40.92
1918	5.92	.51	3.68	6.78	3.71	3.30	2.63	4.43	4.30	1.57	2.10	4.46	43.39
1919	4.61	3.38	4.03	4.55	6.43	3.29	6.52	2.26	.85	4.18	1.65	1.55	43.30
1920	3.24	4.02	4.59	4.74	2.32	5.10	3.34	7.97	2.11	.57	6.07	5.75	49.82
1921	5.02	3.68	1.40	3.88	3.88	3.60	1.86	0.81	3.84	1.74	3.07	1.22	34.00
1922	4.06	4.39	5.69	3.14	4.53	12.57	7.30	3.21	.94	3.48	.25	3.70	53.26
1923	3.83	3.17	5.88	4.55	2.65	1.23	5.07	6.16	3.90	1.15	2.58	2.81	42.98
1924	3.90	3.16	3.65	3.18	6.05	2.67	3.47	1.70	6.93	1.14	1.82	3.70	41.37
1925	6.10	1.24	3.19	2.10	3.03	1.80	1.43	4.31	.54	3.89	2.17	2.42	33.22
1926	4.77	3.97	2.87	1.51	1.35	1.81	9.37	1.77	.54	3.08	4.09	4.59	39.72
1927	1.19	3.37	2.21	3.25	1.84	3.63	7.21	4.61	1.08	5.16	1.79	4.96	40.30
1928	1.87	2.41	3.28	4.93	1.69	5.28	3.72	8.20	9.38	1.06	.52	.95	43.29
1929	1.64	5.73	3.52	5.25	3.30	7.65	5.95	7.22	3.08	7.51	3.03	2.81	56.69
1930	3.51	1.36	1.81	1.50	2.61	4.80	5.57	2.04	3.95	1.69	3.27	4.69	36.80
1931	1.63	1.29	2.76	4.43	4.91	0.87	4.08	10.97	1.18	0.38	0.31	4.72	37.53
1932	5.15	2.56	5.14	2.59	2.90	5.54	3.47	1.23	4.21	7.33	4.87	5.54	50.53
1933	2.87	3.19	2.79	3.70	4.21	1.96	3.54	4.13	2.65	1.08	0.97	2.39	33.48
1934	0.80	3.42	4.79	4.27	5.44	2.20	5.28	3.19	7.46	1.28	3.88	3.21	45.22
1935	4.30	2.28	5.02	4.17	3.44	3.05	7.36	3.83	6.17	2.09	3.63	2.40	47.74
1936	9.04	4.31	5.57	5.02	0.15	3.94	4.16	1.21	3.71	3.92	1.70	3.46	46.19
1937	8.05	3.86	2.10	5.05	4.24	3.66	3.69	9.45	4.05	8.77	2.22	1.35	56.49
1938	2.62	1.96	1.97	2.67	3.53	6.28	8.28	1.56	2.03	1.11	5.64	2.32	39.97
1939	2.55	5.11	4.22	3.74	2.90	3.41	6.04	7.67	0.19	2.42	2.53	2.52	43.30
1940	2.76	2.51	2.90	2.95	4.59	3.38	4.02	7.22	0.98	1.06	6.09	2.20	40.66
1941	1.49	1.12	2.36	2.78	3.31	2.38	5.31	1.10	2.83	0.39	0.77	3.17	27.01
1942	2.50	2.78	4.80	0.55	5.78	5.19	3.34	6.64	3.51	5.52	1.34	3.86	45.81
1943	3.39	2.70	5.01	3.92	3.27	6.27	5.30	3.75	3.59	1.43	1.12	2.91	42.66
1944	3.31	5.54	7.09	4.99	3.30	2.35	5.43	1.91	9.70	2.93	3.15	2.54	52.24
1945	2.34	4.29	2.53	3.44	3.53	1.13	5.11	0.67	12.34	1.68	3.72	5.76	46.54
<b>Averages</b>													
*25 yrs	3.55	3.18	3.70	3.50	3.46	3.87	5.01	4.22	3.95	2.85	2.58	3.21	43.08
Record	3.47	3.23	3.86	3.46	3.61	4.23	4.73	4.67	3.56	2.90	2.42	3.52	43.64

\* Period of 1921-45



Average Temperature - Reidsville, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1902	36.2	34.4	49.4	55.8	69.8	74.2	78.4	74.6	69.5	61.4	56.4	40.0	58.5
1903	38.0	43.8	54.8	56.8	67.0	69.6	77.6	76.4	68.5	-----	-----	35.8	-----
1904	34.6	35.4	48.2	53.6	66.2	72.6	76.2	74.8	70.8	58.6	48.0	38.2	56.4
1905	34.2	31.6	51.4	58.2	68.8	74.7	77.0	75.0	72.1	59.4	49.3	39.8	57.6
1906	42.0	40.6	43.6	61.5	66.8	75.0	76.2	78.6	74.6	56.8	48.7	41.6	58.8
1907	47.6	39.2	54.8	51.9	65.2	70.6	79.4	76.6	73.2	57.4	46.0	40.8	58.6
1908	37.6	35.6	54.7	60.7	66.6	72.0	77.0	74.0	67.4	57.4	50.8	41.6	58.0
1909	43.8	47.3	46.7	58.0	64.8	76.0	74.7	73.6	68.5	57.6	55.4	37.8	58.7
1910	40.1	39.2	57.2	60.6	65.9	70.8	78.2	75.8	73.4	62.8	44.9	35.9	58.7
1911	44.0	45.4	47.8	54.2	70.4	78.1	80.0	77.0	75.0	61.5	-----	44.0	-----
1912	32.2	37.0	47.2	61.6	68.8	74.1	-----	78.8	75.2	62.1	50.0	44.0	-----
1913	47.4	42.5	52.8	58.8	69.2	73.8	79.2	76.0	67.7	59.6	49.8	43.8	60.0
1914	42.8	37.0	44.0	58.4	68.8	79.3	77.9	78.4	68.6	61.3	48.6	37.1	58.5
1915	39.3	44.3	41.5	60.5	66.7	72.6	78.1	77.8	71.8	62.4	51.5	39.1	58.8
1916	47.3	41.6	48.0	57.0	70.7	72.3	76.6	76.6	68.9	60.2	50.2	40.5	59.2
1917	42.0	40.8	47.7	60.4	63.2	73.8	77.0	76.4	66.6	-----	46.8	31.9	-----
1918	29.8	45.8	54.4	55.4	71.5	73.1	74.4	78.6	65.8	63.2	49.0	44.7	58.8
1919	43.2	40.8	50.4	58.8	67.3	74.4	78.0	75.8	72.6	67.0	51.2	39.1	59.9
1920	38.2	37.6	48.9	56.2	63.0	72.8	76.8	74.9	72.0	62.4	48.0	41.4	57.5
1921	41.0	44.6	58.9	60.6	65.6	76.4	79.4	77.0	77.8	59.8	52.8	44.6	61.5
1922	37.3	45.3	51.0	60.1	67.6	75.5	77.7	74.4	72.6	61.5	50.6	44.3	59.8
1923	42.3	40.2	49.2	57.6	65.4	76.0	77.7	76.9	71.8	60.1	47.7	49.5	59.5
1924	39.2	39.2	47.0	56.6	63.9	75.3	75.2	78.4	67.2	61.0	51.0	41.6	58.0
1925	39.8	49.4	51.6	62.5	62.8	78.7	80.9	75.0	77.3	56.7	46.8	41.2	60.2
1926	39.6	45.4	43.9	56.9	68.6	73.1	78.6	79.0	75.0	61.4	46.2	41.2	59.1
1927	40.2	49.6	52.5	58.1	67.3	71.4	76.2	73.2	74.4	63.0	54.0	43.0	60.2
1928	41.0	41.4	49.8	55.0	65.8	73.2	79.4	79.0	67.0	62.7	51.0	42.0	58.9
1929	40.0	40.0	54.5	61.8	67.0	72.4	75.8	74.4	70.1	57.4	51.2	42.9	59.0
1930	42.3	48.1	48.1	59.0	70.1	73.3	79.8	76.0	76.0	57.4	47.0	36.6	59.5
1931	41.8	44.0	44.4	56.9	63.9	75.0	81.5	75.4	76.6	63.4	56.8	49.4	60.8
1932	49.6	49.6	47.0	58.8	66.4	75.1	79.6	78.0	71.6	61.2	47.2	44.6	60.7
1933	47.6	43.2	49.4	58.7	72.1	77.6	78.0	76.8	76.6	60.8	49.3	47.0	61.4
1934	43.8	33.6	45.6	60.1	67.8	77.8	80.6	77.6	72.2	59.2	52.2	41.2	59.3
1935	39.2	42.0	55.2	56.6	65.6	75.0	77.4	76.6	69.8	61.8	54.2	35.1	59.0
1936	35.4	37.4	53.2	55.2	70.2	75.2	78.8	78.6	72.8	62.0	48.4	42.2	59.1
1937	47.2	41.8	47.2	57.6	66.8	76.2	76.3	77.2	67.2	56.7	47.2	40.7	58.5
1938	39.6	46.5	55.0	59.5	67.7	71.9	76.6	78.5	70.8	60.3	52.5	41.2	60.0
1939	43.3	46.3	52.7	57.5	68.1	77.8	76.6	76.6	74.2	63.0	47.9	43.4	60.6
1940	29.2	41.6	46.2	57.2	66.7	76.4	76.2	76.0	69.2	60.1	50.2	46.0	57.9
1941	39.3	37.3	44.3	62.1	69.7	74.6	79.0	78.0	73.8	67.8	51.9	45.4	60.3
1942	38.9	38.6	52.0	62.3	69.3	76.4	79.5	76.2	71.6	61.8	51.6	39.8	59.8
1943	42.8	44.5	48.4	57.4	69.7	79.6	77.6	78.2	68.0	59.0	49.6	42.0	59.7
1944	41.5	44.4	48.0	58.4	71.7	77.2	76.7	76.3	71.7	60.2	48.8	37.2	59.3
1945	39.2	43.5	60.2	62.5	64.7	76.4	78.4	77.5	74.6	60.0	51.6	36.0	60.4
Averages													
*25 yrs	40.8	43.1	50.2	58.8	67.4	75.5	78.1	76.8	72.3	60.7	50.3	42.3	59.7
Record	40.5	41.8	50.0	58.3	67.4	74.7	77.8	76.6	71.6	60.7	50.1	41.2	59.3

\*Period of 1921-45



Highest Temperature - Reidsville, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1902	64	68	76	86	93	97	98	99	91	85	80	68	99
1903	62	71	77	85	95	90	95	97	91	88	73	55	100
1904	65	68	79	83	89	94	98	94	90	88	73	63	98
1905	68	54	78	86	89	93	96	93	93	89	78	64	96
1906	70	71	69	92	97	97	95	94	94	84	74	70	97
1907	77	64	93	84	93	92	100	96	96	86	73	66	100
1908	66	61	84	88	90	95	95	97	90	86	79	73	97
1909	72	73	75	87	89	93	93	96	88	82	79	71	96
1910	73	70	88	89	92	94	96	94	93	89	75	63	96
1911	76	74	76	81	96	105	102	98	95	93	88	70	105
1912	60	64	82	84	93	96	88	100	104	92	77	74	100
1913	72	73	82	87	95	97	98	97	90	81	76	68	98
1914	74	66	78	90	99	103	102	100	97	85	80	63	103
1915	63	70	64	92	92	94	101	99	93	83	80	68	101
1916	74	69	79	87	95	92	91	93	96	91	80	71	96
1917	71	79	77	92	94	96	98	99	91	88	73	66	100
1918	57	77	83	82	95	100	95	101	88	87	73	74	101
1919	70	69	74	87	92	95	98	96	99	95	82	70	99
1920	74	62	78	87	87	96	96	93	92	88	78	64	96
1921	71	72	87	90	90	100	97	101	103	86	80	73	103
1922	66	75	83	89	90	94	95	93	95	92	76	73	95
1923	67	69	80	85	87	97	100	96	93	85	71	77	100
1924	69	69	75	87	87	99	95	100	100	86	80	80	100
1925	66	75	80	94	96	99	99	98	101	84	71	66	101
1926	69	72	79	85	95	99	100	98	96	93	72	68	100
1927	76	78	84	90	94	100	98	93	99	92	78	78	100
1928	77	67	81	80	94	96	97	99	92	88	76	67	99
1929	71	70	88	90	87	92	93	92	92	80	81	73	93
1930	72	84	75	94	91	100	99	104	101	83	79	65	104
1931	70	64	62	92	90	100	101	97	99	91	81	79	101
1932	75	84	78	85	93	94	98	104	103	80	68	70	104
1933	72	73	81	85	94	102	99	99	97	92	81	70	102
1934	71	67	79	89	92	101	101	95	89	81	80	68	101
1935	68	71	85	85	89	96	95	96	91	86	78	65	96
1936	59	76	82	88	94	100	101	98	94	83	78	68	101
1937	74	71	72	89	90	94	97	92	91	85	75	68	97
1938	67	72	84	85	93	90	93	96	93	88	79	67	96
1939	70	77	84	84	92	94	94	93	99	93	76	73	99
1940	54	68	76	83	95	95	101	93	94	87	78	70	101
1941	65	59	72	90	99	94	97	99	98	97	75	72	99
1942	70	63	78	90	92	96	101	100	93	83	80	70	101
1943	78	75	80	88	90	98	96	97	95	86	78	78	98
1944	78	79	82	87	94	100	96	96	97	89	78	64	100
1945	61	70	91	90	91	104	101	99	95	83	83	61	104



Lowest Temperature - Reidsville, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1902	15	14	18	28	42	51	58	56	43	32	28	14	14
1903	14	11	26	26	41	44	54	60	44	11	11	11	0
1904	10	9	22	27	43	48	57	54	39	30	25	17	9
1905	9	2	28	29	45	49	60	51	48	32	19	16	2
1906	18	12	22	32	32	52	58	65	53	27	25	15	12
1907	13	13	26	26	38	48	58	54	45	34	22	17	13
1908	10	9	25	27	33	40	48	51	39	30	23	16	9
1909	12	13	21	25	32	50	50	50	43	29	30	10	10
1910	17	15	25	35	36	47	58	61	47	25	24	14	14
1911	20	23	19	30	38	55	57	56	49	38	00	20	00
1912	0	10	23	30	43	46	61	55	50	40	22	19	0
1913	25	16	20	32	38	44	58	59	43	29	22	22	16
1914	16	11	16	29	40	54	52	56	45	25	13	11	11
1915	20	22	22	28	49	48	56	61	44	32	24	19	19
1916	12	9	19	30	46	54	58	58	41	35	20	11	9
1917	13	2	21	30	37	48	59	54	44	00	20	-2	00
1918	4	11	26	30	37	48	53	51	39	36	26	22	4
1919	11	16	28	27	47	51	52	54	46	47	25	16	11
1920	7	12	11	27	38	51	54	57	50	30	19	20	7
1921	16	23	28	29	40	51	58	53	57	31	24	23	16
1922	13	10	25	34	40	54	57	54	50	36	20	19	10
1923	23	13	19	20	33	51	59	50	49	37	26	23	13
1924	4	17	24	27	40	54	57	54	45	31	23	13	4
1925	13	22	12	34	37	54	58	52	54	27	19	6	6
1926	14	19	11	29	41	50	55	51	52	30	20	12	11
1927	7	25	20	30	40	51	50	53	43	38	25	16	7
1928	4	20	25	29	40	51	61	60	40	30	17	20	4
1929	17	18	21	34	44	43	57	53	41	35	11	11	11
1930	14	17	18	32	43	45	58	52	50	30	14	14	14
1931	13	20	26	33	39	50	62	52	44	33	26	24	13
1932	26	26	14	33	42	56	54	58	47	36	19	15	14
1933	17	10	20	36	46	45	50	58	48	30	19	13	10
1934	2	6	14	31	46	58	66	56	50	31	22	15	2
1935	6	12	24	31	43	53	58	53	44	33	19	7	6
1936	3	8	30	25	44	52	57	54	44	31	18	20	3
1937	30	17	16	30	36	58	55	61	46	29	17	14	14
1938	10	23	24	32	46	47	57	60	44	35	15	18	10
1939	17	15	23	31	37	64	61	58	52	32	29	21	15
1940	-2	15	18	24	38	55	55	59	89	31	25	15	-2
1941	15	17	18	40	38	54	63	53	48	36	23	22	15
1942	2	14	28	29	45	55	61	49	37	28	23	9	2
1943	14	7	9	25	38	65	58	54	43	29	24	9	7
1944	18	13	20	26	40	52	56	55	48	32	24	15	13
1945	18	11	33	28	37	45	60	55	56	34	22	10	10



Precipitation in Wilmington, New Hanover County, North Carolina;  
Monthly and annual (in inches and hundredths)

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1871	2.22	3.06	6.55	3.67	6.87	4.26	2.82	8.29	2.26	3.02	4.46	3.90	51.38
1872	3.62	5.20	6.42	.97	4.89	2.87	5.54	11.15	8.22	2.83	3.37	4.10	59.18
1873	4.13	5.55	1.68	1.75	8.63	3.60	4.93	7.42	9.97	2.84	3.18	4.69	58.37
1874	5.14	6.54	3.72	2.88	5.07	2.89	5.83	4.04	9.35	3.38	.91	2.67	52.42
1875	5.52	1.97	4.55	3.92	2.84	11.67	1.95	7.44	2.23	2.53	1.77	3.20	49.59
1876	.52	3.04	4.54	2.82	3.44	12.44	7.62	8.55	9.41	7.22	1.65	5.48	66.73
1877	2.37	1.65	4.52	6.61	2.36	7.48	9.35	10.46	20.10	6.68	4.94	7.13	83.65
1878	7.52	4.07	2.33	2.41	4.80	4.33	3.11	7.37	7.34	5.54	2.39	3.62	54.83
1879	2.12	3.71	2.06	5.33	5.06	3.35	4.67	11.37	6.18	2.60	2.48	2.21	51.14
1880	3.55	2.85	1.93	3.52	1.84	6.93	9.20	8.79	1.20	5.28	5.30	1.52	51.91
1881	5.06	2.80	5.14	3.47	2.11	3.48	12.40	4.99	3.50	1.48	2.95	3.64	51.02
1882	1.96	1.92	7.09	2.27	1.40	2.96	8.89	7.94	3.34	7.57	2.78	4.02	52.14
1883	6.33	2.09	5.78	5.01	4.79	10.84	4.71	5.19	16.53	1.09	.42	1.22	64.00
1884	5.22	3.80	6.07	2.45	3.70	7.94	8.29	9.58	9.34	.63	1.96	3.72	62.70
1885	5.18	2.52	2.05	3.05	8.58	8.21	4.04	5.87	5.69	8.73	2.67	3.83	60.42
1886	3.90	2.15	5.60	3.26	1.18	8.81	21.12	4.38	1.34	.48	.19	4.02	56.43
1887	3.30	1.61	1.48	3.96	5.62	6.41	6.77	9.88	.46	6.53	1.04	4.41	51.47
1888	2.21	6.22	4.74	1.10	4.41	3.56	5.87	4.61	8.28	5.65	5.50	2.92	55.07
1889	6.85	4.66	5.57	2.13	4.24	6.03	11.10	7.81	3.18	3.87	3.72	.15	59.31
1890	1.59	1.25	1.50	2.73	5.26	3.26	8.22	6.48	8.19	1.88	.36	.61	41.33
1891	4.46	1.54	5.15	1.15	1.03	3.47	6.21	11.96	4.61	6.01	1.46	.95	48.00
1892	4.91	3.65	2.69	1.13	1.64	6.13	10.26	4.38	5.90	.57	.59	1.03	42.88
1893	2.26	2.94	2.40	1.02	5.01	5.58	4.23	8.01	3.06	3.26	1.71	3.27	42.75
1894	3.70	3.53	2.27	.78	4.86	3.06	9.08	4.23	6.34	4.58	1.97	.78	45.18
1895	4.80	2.38	2.94	6.56	4.37	2.97	4.82	4.52	4.46	1.67	3.38	1.40	46.27
1896	2.45	4.74	1.98	.64	3.13	5.37	5.72	2.48	3.10	4.08	3.52	3.21	40.42
1897	1.76	6.26	1.23	2.17	2.49	3.88	4.50	3.50	1.54	4.44	1.53	4.38	37.68
1898	1.40	3.27	1.52	2.40	2.51	4.59	7.03	5.93	1.28	7.56	2.67	2.40	42.56
1899	2.40	3.94	1.01	4.50	4.12	4.95	8.05	5.79	.12	2.69	1.09	1.41	40.07
1900	6.24	2.69	2.48	1.85	3.32	4.59	1.08	1.90	2.38	4.20	3.66	5.69	40.08
1901	2.48	3.21	3.98	2.00	6.18	7.27	8.25	6.82	5.38	2.69	1.16	4.72	54.14
1902	1.39	3.29	3.61	1.62	2.33	3.17	2.98	2.35	3.57	3.18	3.83	3.26	34.58
1903	3.43	3.54	3.32	2.05	2.90	8.63	3.00	14.35	1.16	2.46	1.03	2.35	48.22
1904	3.24	2.19	4.33	1.44	2.68	3.74	6.11	6.77	1.75	1.26	1.64	1.74	36.89
1905	1.80	5.44	3.19	4.80	5.76	1.73	7.42	2.93	2.25	3.80	.78	5.51	45.41
1906	3.26	2.89	4.48	.49	3.60	9.17	7.64	4.64	3.41	4.75	1.29	3.37	48.99
1907	.92	2.64	1.40	4.29	5.52	9.83	6.40	10.17	6.01	.27	2.49	2.31	52.25
1908	2.92	5.68	4.71	2.08	2.80	5.39	9.40	9.52	1.45	5.74	2.07	2.22	53.98
1909	1.06	3.30	.89	3.76	3.07	2.57	2.97	4.09	1.23	1.67	.57	2.50	27.68
1910	1.07	6.61	1.02	1.61	4.61	7.52	6.99	8.47	1.88	1.72	.92	1.30	43.72
1911	2.03	.45	3.95	.70	.28	2.14	3.64	13.85	5.79	2.75	1.04	3.41	40.03
1912	4.14	3.38	3.21	2.73	4.76	6.10	2.81	2.60	4.14	1.02	1.39	2.64	38.92
1913	1.80	4.48	4.88	1.07	2.90	6.06	5.93	5.47	3.54	10.14	.65	3.63	50.55
1914	2.02	6.04	2.89	5.12	.10	1.13	2.38	7.67	5.39	4.84	3.30	2.39	43.27
1915	8.41	2.97	2.18	1.85	3.59	2.28	8.12	9.24	2.71	1.53	.99	1.81	45.68
1916	1.12	2.64	2.83	1.21	3.35	6.73	10.83	2.36	4.57	5.12	1.97	1.19	43.92
1917	3.09	1.18	4.00	2.55	2.26	6.97	12.37	2.26	9.28	.34	.66	2.45	47.41
1918	2.17	2.77	.78	6.24	1.52	3.22	6.41	6.13	1.50	.32	2.62	4.67	38.35
1919	3.23	2.83	2.20	3.23	1.26	4.25	8.43	5.52	1.90	1.03	.07	1.87	35.82
1920	1.10	3.62	4.11	4.69	1.22	3.96	7.23	5.23	11.09	.48	3.31	4.08	50.12



Precipitation in Wilmington, New Hanover County, North Carolina:  
Monthly and annual (in inches and hundredths) continued -

Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
1921	4.16	3.32	1.44	4.94	6.87	2.92	11.17	3.50	1.86	2.82	2.22	1.54	46.76
1922	3.57	3.15	4.47	3.26	5.20	7.67	9.64	5.42	7.48	6.40	.46	3.81	60.53
1923	3.22	1.41	4.09	1.28	1.32	1.80	8.77	5.04	7.20	1.44	1.74	3.17	40.48
1924	2.21	2.61	2.70	2.20	5.02	8.23	13.82	2.53	16.93	.90	1.34	3.32	61.81
1925	5.36	2.52	2.19	1.16	3.08	3.10	4.25	4.65	1.78	3.61	2.04	4.44	38.18
1926	5.01	3.98	4.19	3.34	3.37	4.60	3.68	8.94	1.70	1.46	2.86	1.42	44.55
1927	1.20	2.15	2.39	.19	.91	4.33	6.42	8.31	3.35	1.44	2.08	3.27	36.04
1928	1.07	6.14	1.84	7.19	3.18	3.07	9.57	7.11	13.41	1.21	2.74	3.58	60.11
1929	5.64	5.21	2.06	1.64	5.25	2.87	5.03	7.80	6.56	5.81	1.63	4.27	53.77
1930	3.69	.38	2.98	1.62	1.51	3.89	7.48	1.56	5.82	1.86	1.92	4.55	37.26
1931	2.07	1.72	3.06	1.13	3.62	1.82	6.33	5.53	0.12	0.50	0.15	2.64	28.69
1932	2.57	1.93	3.94	0.91	5.14	3.85	4.28	3.16	5.44	5.42	6.51	2.86	46.01
1933	2.22	5.83	2.88	4.50	3.34	1.61	7.63	6.45	8.27	0.07	0.38	0.19	43.37
1934	1.15	3.51	4.46	1.16	5.58	3.42	3.09	5.28	7.06	0.77	7.70	3.00	46.18
1935	2.89	1.74	1.88	1.89	0.97	2.33	15.97	10.02	5.44	0.19	3.74	5.01	52.07
1936	4.00	5.05	10.43	1.56	0.20	3.57	4.95	4.32	4.25	7.15	3.03	6.51	55.02
1937	4.27	5.18	1.87	6.74	2.29	3.93	6.45	4.64	2.13	1.78	6.17	2.14	47.58
1938	2.26	0.93	1.98	4.69	3.78	5.07	11.00	5.84	16.28	1.48	0.92	3.15	57.38
1939	3.23	5.97	2.80	1.82	4.64	4.78	7.43	7.21	2.67	3.00	0.79	1.56	45.90
1940	3.16	5.69	1.90	2.39	3.24	5.06	1.38	14.14	1.96	1.44	1.86	2.96	45.15
1941	1.62	3.22	3.03	2.65	0.86	5.51	7.79	6.15	1.07	0.65	0.31	6.20	39.06
1942	2.05	3.97	5.44	0.87	6.03	4.76	3.63	10.02	3.89	5.17	0.93	2.99	49.75
1943	4.90	1.35	5.69	2.11	3.61	5.44	10.32	5.87	2.20	0.01	1.25	3.75	44.69
1944	3.43	6.20	6.83	3.84	2.18	2.65	5.14	6.60	2.51	7.91	2.07	2.98	52.34
1945	2.08	3.38	.26	3.10	1.84	11.74	11.92	9.56	8.96	2.06	2.43	6.62	63.95
Averages													
*25 yrs	3.08	3.46	3.39	2.65	3.32	4.32	7.49	6.39	5.53	2.58	2.29	3.44	47.86
Record	3.21	3.43	3.38	2.74	3.51	5.01	6.98	6.59	5.14	3.18	2.17	3.14	48.47

\*Period of 1921-45



## Average Temperature - Wilmington, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1871	45.5	51.9	60.1	65.6	71.9	80.7	81.9	80.2	70.5	65.3	54.2	45.3	64.4
1872	42.4	45.3	48.3	63.2	73.5	78.8	84.5	80.9	75.7	62.4	51.5	41.4	62.3
1873	47.0	50.0	52.1	63.0	72.0	78.1	81.4	80.0	73.8	61.1	52.0	48.5	63.2
1874	49.5	48.4	57.3	62.4	70.6	80.6	79.2	77.4	73.8	64.0	55.9	49.1	64.0
1875	42.4	45.5	54.0	58.8	68.6	74.8	83.6	77.7	72.2	60.5	55.6	51.6	62.1
1876	52.8	52.2	52.2	60.9	68.0	77.6	80.7	79.5	74.2	59.7	53.4	39.2	62.5
1877	47.0	48.8	53.4	60.4	64.5	77.8	81.6	79.8	73.6	66.0	56.7	50.8	63.4
1878	46.2	48.5	59.9	64.5	69.4	73.7	81.0	80.8	75.6	64.3	54.8	44.5	63.6
1879	45.6	45.2	57.2	60.0	69.8	75.2	79.6	78.2	71.4	68.6	55.0	56.5	63.5
1880	55.3	53.1	56.6	63.4	70.7	76.5	80.6	77.8	73.2	63.4	52.2	43.6	63.9
1881	43.6	49.0	52.4	58.4	70.6	78.4	80.8	78.9	78.6	69.4	58.8	52.9	64.3
1882	51.0	54.4	57.9	63.3	68.2	77.3	78.9	79.6	74.0	67.4	52.3	47.6	64.4
1883	46.8	54.6	55.6	61.6	69.1	79.4	82.0	79.0	72.6	66.6	57.5	53.0	64.8
1884	44.6	57.4	58.8	60.8	72.0	73.8	80.3	77.4	73.8	68.8	57.6	51.5	64.7
1885	49.5	45.4	49.4	61.8	70.8	76.6	81.2	80.0	73.4	62.2	55.2	49.1	62.9
1886	42.2	44.4	52.6	62.6	70.7	75.7	79.3	78.0	75.8	64.9	55.6	45.8	62.3
1887	43.8	54.8	51.9	59.6	70.7	75.6	81.4	77.5	70.8	62.4	51.8	47.6	62.3
1888	46.7	50.6	51.0	61.6	70.1	76.8	77.4	78.2	72.8	62.6	57.0	46.8	62.6
1889	50.0	44.4	51.9	60.6	70.9	75.5	79.0	76.0	71.8	60.9	56.8	56.0	62.8
1890	57.2	58.4	53.2	61.0	70.8	80.1	77.4	76.4	74.0	63.9	57.4	47.4	64.8
1891	47.6	55.8	52.2	62.1	67.6	77.2	76.6	79.0	74.0	60.6	52.8	53.1	63.2
1892	44.8	48.2	50.1	60.2	69.7	76.1	78.1	79.5	72.6	62.6	52.9	47.4	61.8
1893	39.0	52.3	53.6	65.8	69.2	75.6	80.6	77.6	74.9	64.4	55.2	51.1	63.3
1894	49.6	50.6	59.6	61.0	70.5	75.4	77.6	78.1	75.9	65.2	54.1	49.0	63.9
1895	46.1	37.4	53.4	60.8	67.8	77.4	78.2	78.9	76.6	62.0	56.0	48.6	61.9
1896	44.2	48.7	52.2	63.7	74.4	76.0	79.8	79.0	74.2	61.7	60.2	45.8	63.3
1897	43.6	52.0	56.8	61.4	68.4	78.0	80.1	78.6	73.0	65.9	57.0	49.4	63.7
1898	50.4	45.6	59.4	58.5	71.6	77.0	79.0	79.0	75.7	64.5	53.8	48.4	63.6
1899	47.2	43.4	56.0	58.4	70.2	77.3	78.0	79.8	73.2	65.3	56.0	46.5	62.6
1900	47.2	45.4	52.0	62.3	70.0	75.4	81.3	82.4	76.6	68.0	57.8	47.1	63.8
1901	45.8	42.4	54.8	55.9	70.4	76.0	79.6	78.6	74.5	63.8	48.7	46.8	61.4
1902	43.4	41.4	54.7	60.0	71.0	76.4	80.5	77.4	72.4	66.1	59.8	49.0	62.7
1903	46.2	51.7	60.6	61.0	69.2	74.2	80.0	79.8	72.2	62.3	50.9	42.6	62.6
1904	41.3	43.8	55.0	59.3	68.9	75.4	79.1	77.6	73.4	62.2	52.7	45.7	61.2
1905	42.0	40.7	56.6	61.0	72.8	75.8	79.4	77.1	75.1	64.3	54.8	47.4	62.2
1906	49.9	46.0	51.8	63.4	69.4	78.1	78.1	80.6	77.4	64.5	54.8	47.8	63.5
1907	52.2	44.8	59.8	55.1	68.7	73.2	80.3	78.8	76.7	60.6	53.8	49.1	62.8
1908	45.6	45.6	59.4	65.4	70.8	75.1	79.0	78.4	72.0	63.5	57.8	51.6	63.7
1909	50.6	53.1	53.9	63.2	69.3	78.0	77.0	77.8	71.0	61.2	58.4	43.8	63.1
1910	47.0	47.3	58.4	63.3	68.8	74.7	79.0	77.0	75.0	66.8	50.5	43.0	62.6
1911	50.4	51.5	52.5	60.2	70.2	78.8	79.8	79.1	77.6	67.2	53.4	52.2	64.4
1912	41.0	43.1	53.4	64.2	70.4	74.9	79.0	78.8	76.4	64.8	53.8	51.5	62.6
1913	55.6	49.2	58.1	60.4	70.4	74.4	80.0	77.4	71.8	63.8	54.2	49.6	63.7
1914	48.6	44.8	48.4	62.0	70.4	78.0	79.4	79.0	70.8	65.8	54.4	45.6	62.3
1915	47.6	49.6	46.4	61.8	71.9	75.1	79.5	79.2	76.0	67.4	56.8	44.5	63.0
1916	52.9	48.0	52.0	60.2	71.8	75.2	78.1	79.0	72.0	65.0	56.6	49.4	60.4
1917	51.2	47.6	55.4	63.4	66.6	75.1	78.9	78.4	70.4	60.7	51.4	38.0	61.4
1918	39.3	51.6	57.5	61.2	72.3	74.6	76.6	79.8	70.4	67.2	54.4	52.0	63.1
1919	49.2	47.3	55.6	61.6	70.8	74.0	78.6	78.3	73.1	73.8	56.8	47.1	63.8
1920	46.7	44.9	53.2	61.6	64.9	76.2	77.8	77.6	75.4	65.0	55.2	48.8	62.3



Average Temperature - Wilmington, N. C.  
Continued

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average
1921	48.4	50.5	63.0	63.4	66.8	76.6	78.6	77.6	79.2	63.7	59.6	50.4	64.8
1922	44.0	52.4	56.8	63.7	70.5	77.2	79.4	75.8	73.6	66.1	54.7	53.2	64.0
1923	50.2	45.8	57.0	61.2	68.2	76.7	78.0	78.2	74.2	61.8	53.3	54.4	63.3
1924	47.2	46.1	52.3	60.8	69.3	77.4	77.9	79.1	70.9	62.9	56.4	50.0	62.5
1925	46.3	54.2	56.6	64.1	67.9	78.3	80.7	78.2	78.8	64.5	53.6	46.8	64.2
1926	46.6	50.2	49.1	60.6	68.8	76.0	80.0	81.5	76.5	66.8	53.6	50.8	63.4
1927	46.6	57.6	55.6	61.4	71.6	75.3	77.8	76.2	75.2	66.4	58.8	49.5	64.3
1928	47.6	49.4	54.0	60.2	67.8	77.3	79.0	80.0	73.4	67.2	55.4	48.8	63.3
1929	49.8	47.3	58.9	65.4	69.6	75.0	78.0	77.5	73.6	64.1	57.0	49.3	63.8
1930	48.8	53.2	52.1	63.5	72.4	75.2	81.6	76.7	78.6	61.2	53.5	44.6	63.4
1931	47.0	49.4	50.1	60.6	68.7	75.8	81.8	78.5	76.8	67.0	61.4	56.4	64.5
1932	57.3	55.9	51.8	61.8	68.8	76.8	81.6	79.1	73.9	66.6	54.3	53.8	65.1
1933	53.6	50.6	54.8	62.6	74.3	77.5	77.7	79.2	78.9	65.8	54.5	54.2	65.3
1934	50.5	41.2	52.0	63.4	68.2	78.5	81.2	80.2	76.0	64.6	57.6	47.2	63.4
1935	47.6	48.6	60.6	61.6	69.1	77.6	77.8	78.8	74.0	65.2	57.6	40.8	63.3
1936	44.2	44.6	57.8	60.8	70.6	76.5	80.4	80.3	76.4	67.4	54.5	50.6	63.7
1937	59.6	47.8	53.2	62.4	69.6	78.2	79.8	79.4	72.8	62.8	52.8	46.2	63.7
1938	46.9	52.1	59.8	64.0	72.5	75.6	78.2	80.7	74.9	63.4	58.4	49.4	64.7
1939	50.4	55.2	58.6	62.4	69.4	79.8	79.2	78.8	76.4	66.8	52.0	48.2	64.8
1940	36.9	47.1	52.3	59.6	68.6	78.4	79.6	79.1	72.4	63.6	56.1	52.6	62.2
1941	45.9	42.4	49.0	64.8	70.4	76.9	80.4	79.9	77.1	70.7	57.7	51.6	63.9
1942	46.4	42.0	56.8	63.4	71.3	78.2	82.8	78.2	76.2	66.8	57.8	47.6	64.0
1943	48.0	49.2	53.6	60.4	71.6	81.1	78.9	79.6	71.9	63.7	53.6	46.8	63.2
1944	47.4	51.4	55.0	62.2	73.3	79.7	78.6	77.9	76.2	64.4	54.4	43.7	63.7
1945	45.4	50.7	62.6	66.8	68.6	77.8	79.2	78.1	78.8	64.8	57.6	43.2	64.4
<b>Averages</b>													
*25 yrs	48.1	49.4	55.3	62.4	69.9	77.3	79.5	78.7	75.5	65.1	55.8	49.2	63.9
Record	47.3	48.7	54.8	61.8	70.0	76.7	79.6	78.7	74.4	64.5	55.2	48.4	63.3

\*Period of 1921-45

Highest Temperature - Wilmington, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1871	70	73	76	86	90	94	102	94	86	82	78	72	102
1872	63	68	72	87	92	94	98	95	96	85	75	67	98
1873	69	67	74	88	91	94	96	94	93	81	73	72	96
1874	73	74	80	82	92	98	92	94	90	82	77	77	98
1875	68	78	75	89	90	91	102	92	95	83	79	77	102
1876	76	77	68	87	93	99	97	97	95	80	81	66	99
1877	74	71	78	85	89	97	97	95	90	82	83	72	97
1878	67	71	84	87	95	91	97	99	94	86	76	70	99
1879	77	72	82	82	91	93	103	98	92	86	83	78	103
1880	76	81	82	90	92	100	98	93	94	83	77	77	100



Highest Temperature - Wilmington, N. C.  
Continued

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1881	66	71	78	86	93	95	96	94	90	87	81	73	96
1882	73	77	82	82	86	94	93	94	89	81	79	68	94
1883	68	76	72	81	84	94	97	96	90	90	82	72	97
1884	71	75	78	84	89	90	94	90	89	92	76	75	94
1885	74	70	71	84	88	93	94	94	89	81	80	71	94
1886	69	70	78	87	94	92	94	93	91	87	77	69	94
1887	73	74	82	86	88	98	100	95	91	85	74	67	100
1888	75	72	76	88	86	94	96	95	88	79	79	68	96
1889	69	67	72	86	97	93	94	87	87	83	78	76	97
1890	80	80	77	86	90	100	92	89	89	86	80	74	100
1891	75	80	72	82	85	95	92	93	91	89	78	73	95
1892	71	69	74	80	86	92	96	93	87	83	81	77	96
1893	70	76	76	89	87	90	97	89	95	82	76	74	97
1894	75	76	87	84	90	94	91	95	94	87	76	74	95
1895	74	74	82	81	96	100	93	94	96	84	80	75	100
1896	66	72	78	89	96	91	98	95	94	80	80	70	98
1897	68	77	82	84	89	96	97	93	94	86	76	70	97
1898	76	70	84	81	96	94	95	90	91	84	76	73	96
1899	73	74	78	85	92	95	92	98	94	88	77	72	98
1900	71	75	73	84	87	91	98	97	94	85	81	72	98
1901	73	72	77	75	94	93	95	89	92	82	78	73	95
1902	75	68	80	83	90	95	100	94	88	84	79	73	100
1903	70	76	77	86	92	89	96	97	90	84	78	68	97
1904	70	74	80	80	87	93	96	95	90	85	73	71	96
1905	72	65	78	83	92	95	95	93	92	86	77	74	95
1906	74	74	80	88	93	95	91	96	94	85	80	73	96
1907	78	73	94	80	86	88	100	94	89	85	76	71	100
1908	65	67	84	88	89	93	93	92	88	83	80	77	93
1909	71	73	75	85	88	91	90	91	88	79	78	73	91
1910	71	73	86	87	90	92	92	90	94	88	73	67	94
1911	74	76	78	84	93	96	93	94	92	91	78	74	96
1912	70	71	80	81	94	96	94	94	96	84	78	75	96
1913	76	76	78	84	92	96	96	92	88	85	78	72	96
1914	75	74	76	90	91	98	99	92	92	86	79	72	99
1915	69	72	75	86	94	94	95	92	96	84	81	71	96
1916	76	74	80	88	92	92	92	95	92	85	80	76	95
1917	76	80	79	90	91	90	97	92	90	83	76	73	97
1918	68	77	83	83	93	96	96	98	88	85	77	76	98
1919	75	68	75	87	86	92	95	95	89	93	82	74	95
1920	73	68	79	88	83	98	95	92	93	85	80	70	98
1921	74	77	85	85	90	96	94	94	95	83	79	73	96
1922	76	76	79	91	89	94	91	90	90	84	80	76	94
1923	74	76	80	88	82	93	92	93	89	80	77	74	93
1924	71	68	78	85	88	99	95	94	90	82	81	79	99
1925	72	74	81	93	90	96	97	101	100	88	76	70	101
1926	70	72	76	82	93	96	98	94	97	87	77	74	98
1927	76	81	82	85	89	94	93	92	95	87	79	80	95
1928	77	68	78	81	89	98	93	92	92	89	80	71	98
1929	74	72	87	88	85	91	93	94	87	87	81	76	94
1930	75	81	72	92	89	93	98	95	91	85	78	68	98



Highest Temperature - Wilmington, N. C.  
Continued -

Year	January	February	March	April	May	June	July	August	September	October	November	December	Highest
1931	72	73	73	84	86	93	96	94	98	85	82	80	98
1932	78	77	79	85	91	94	96	98	94	81	76	76	98
1933	74	74	81	79	94	98	92	94	93	87	79	77	98
1934	74	68	77	87	88	92	97	93	88	84	79	70	97
1935	72	74	88	83	91	92	92	97	90	85	80	67	97
1936	71	74	84	87	95	95	102	95	90	84	80	72	102
1937	80	72	78	82	89	94	95	90	91	88	77	72	95
1938	71	77	79	81	93	88	91	96	92	86	80	72	96
1939	73	78	83	84	88	96	92	92	98	87	75	72	98
1940	66	69	77	85	88	96	98	94	92	86	78	73	98
1941	71	64	70	89	94	93	96	95	94	88	80	74	96
1942	70	70	80	87	84	96	101	95	95	80	80	73	101
1943	78	74	81	81	88	100	92	93	90	84	77	78	100
1944	78	77	83	82	91	100	94	92	96	87	76	72	100
1945	68	78	85	86	89	94	91	91	94	84	82	67	94

Lowest Temperature - Wilmington, N. C.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1871	25	30	38	49	53	74	65	70	49	48	32	18	18
1872	25	22	30	47	58	66	76	65	60	45	20	17	17
1873	23	26	20	43	55	58	67	70	58	36	30	22	20
1874	19	32	32	34	48	63	64	56	55	40	33	26	19
1875	21	15	28	28	43	58	68	65	50	36	28	18	15
1876	20	24	22	39	38	53	63	63	50	32	32	15	15
1877	17	28	28	36	42	58	64	66	56	45	28	25	17
1878	21	31	34	40	43	52	66	62	55	40	32	21	21
1879	15	23	26	32	48	53	63	58	47	36	24	24	15
1880	25	30	34	34	45	55	65	60	51	38	23	10	10
1881	28	19	31	33	54	59	62	62	62	47	26	31	19
1882	24	29	36	42	47	58	66	63	56	47	34	17	17
1883	23	34	30	40	48	62	68	62	59	48	28	27	23
1884	9	29	30	41	51	51	67	63	58	41	35	17	9
1885	23	20	26	37	51	58	62	60	52	42	30	27	20
1886	12	10	29	39	47	56	66	60	58	38	30	22	10
1887	15	27	28	33	47	53	66	56	42	35	26	19	15
1888	20	25	24	37	51	53	60	59	44	45	36	26	20
1889	29	20	33	42	45	58	66	63	48	37	27	30	20
1890	27	32	22	38	50	63	58	60	58	38	32	26	22
1891	26	30	30	36	41	60	61	60	58	36	25	23	23
1892	23	22	27	35	49	61	60	66	55	38	25	22	22
1893	13	31	26	44	50	60	66	62	49	38	26	31	13
1894	31	25	27	41	49	53	62	65	63	45	29	14	14
1895	20	10	29	37	47	54	63	65	58	39	31	22	10

Lowest Temperature - Wilmington, N. C.  
Continued -

Year	January	February	March	April	May	June	July	August	September	October	November	December	Lowest
1896	17	12	28	38	44	61	66	59	45	42	33	21	12
1897	14	30	34	35	49	64	68	63	52	48	32	26	14
1898	18	18	33	35	44	58	62	66	56	40	27	24	18
1899	18	5	25	33	50	57	61	65	50	44	38	16	5
1900	16	17	29	34	52	57	70	64	56	46	33	23	16
1901	25	18	21	39	52	61	69	68	55	43	26	16	16
1902	21	23	24	37	51	57	65	61	55	40	33	19	19
1903	22	23	38	35	47	55	66	66	53	37	21	19	19
1904	15	21	29	36	50	53	68	61	48	39	31	24	15
1905	16	17	34	36	54	55	68	58	55	40	28	26	16
1906	26	20	30	37	42	64	67	70	62	35	32	20	20
1907	21	21	32	32	49	56	64	65	60	38	32	27	21
1908	23	21	31	39	42	60	66	63	55	45	34	30	21
1909	19	20	33	38	48	61	62	60	48	38	33	16	16
1910	22	22	31	40	48	56	63	65	55	31	32	22	22
1911	27	28	32	38	48	58	65	65	58	50	29	28	27
1912	12	17	30	42	54	53	65	60	55	43	29	26	12
1913	32	28	32	41	45	51	66	64	51	37	30	27	27
1914	24	19	22	37	49	60	60	65	50	34	24	20	19
1915	27	27	31	33	55	57	65	65	54	40	31	25	25
1916	20	15	25	35	51	58	66	64	51	43	29	27	15
1917	22	13	31	38	44	58	67	63	51	33	27	6	6
1918	11	24	32	36	45	58	58	60	48	47	37	28	11
1919	20	24	38	33	52	57	54	64	56	53	30	24	20
1920	13	24	24	36	42	57	58	64	56	36	30	30	13
1921	23	33	38	36	46	51	67	58	67	42	32	28	23
1922	22	20	35	41	49	64	67	62	58	45	29	30	20
1923	30	22	29	29	44	60	64	62	56	43	30	28	22
1924	12	25	29	35	47	62	62	65	55	39	30	24	12
1925	24	30	24	40	46	61	67	62	60	38	27	13	13
1926	26	28	21	34	45	56	63	67	60	38	30	19	19
1927	14	34	27	38	49	58	59	59	55	44	32	25	14
1928	14	27	32	38	46	56	64	65	53	45	27	30	14
1929	29	26	28	42	48	52	63	61	51	45	24	20	20
1930	25	25	27	41	50	54	65	57	63	37	26	26	25
1931	24	26	30	41	48	56	69	61	52	44	37	31	24
1932	33	33	21	41	51	58	63	66	52	45	30	26	21
1933	31	21	31	44	53	51	58	67	60	42	29	20	20
1934	11	10	26	39	49	66	69	57	61	40	29	22	10
1935	15	22	31	38	51	59	65	63	54	38	27	17	15
1936	18	14	36	34	53	60	62	65	58	40	26	34	14
1937	39	25	25	39	45	63	66	66	56	38	24	22	22
1938	21	29	30	41	54	52	63	67	55	43	25	29	21
1939	30	24	32	41	40	67	66	63	58	42	29	25	24
1940	14	19	26	34	44	96	64	65	52	39	28	24	14
1941	25	26	27	45	45	60	70	62	58	48	32	30	25
1942	17	22	31	38	52	65	68	60	46	41	32	15	15
1943	27	16	20	35	50	68	63	62	50	38	31	12	12
1944	20	22	30	33	61	60	64	61	57	36	32	23	20
1945	29	19	40	43	47	54	67	62	68	40	28	22	19



Evaporation in Inches  
Monthly and Annual  
Land Pan - Chapel Hill, N. C.

Year	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly Total
1921	.....	.....	.....	3.692	3.318	4.593	5.152	5.449	4.466	3.205	1.489	1.275	.....
1922	1.064	1.098	2.970	3.823	4.503	4.879	4.862	4.684	4.499	3.035	1.751	1.464	38.632
1923	1.270	1.288	3.081	3.754	4.469	6.137	5.804	5.597	4.813	2.672	1.716	1.208	41.801
1924	1.761	1.854	3.242	3.895	4.576	5.271	4.728	4.802	3.945	2.370	1.489	1.837	39.770
1925	1.340	2.000	3.026	4.661	4.881	6.172	6.824	6.353	4.667	2.765	1.410	1.301	45.391
1926	1.220	2.252	3.267	4.758	5.899	5.856	6.342	5.513	4.037	2.761	1.552	1.127	44.584
1927	1.316	1.826	3.218	3.570	5.694	5.280	6.044	4.361	4.212	3.399	2.028	1.738	42.686
1928	1.785	1.620	3.159	3.701	4.225	5.220	5.218	4.766	4.092	2.658	1.741	1.208	39.423
1929	1.112	1.667	4.375	4.375	4.725	4.776	5.171	5.044	3.764	2.890	1.975	1.010	40.884
1930	1.550	2.065	3.019	3.626	4.825	5.181	6.285	5.263	3.992	3.821	1.843	1.332	42.802
1931	1.994	1.863	2.599	4.130	5.333	6.370	6.741	4.864	3.417	3.347	1.846	1.157	43.661
1932	1.396	2.067	3.491	4.644	5.222	6.242	6.742	6.059	4.458	2.711	1.642	1.246	45.920
1933	1.689	2.076	3.627	4.431	6.246	7.646	6.682	5.093	4.514	3.718	2.049	1.557	49.328
1934	1.273	3.099	3.008	4.423	5.283	6.546	5.478	4.888	3.577	2.903	2.335	1.591	44.404
1935	1.437	2.296	3.196	3.423	4.897	6.393	6.029	5.549	3.327	2.817	1.653	1.413	42.432
1936	0.943	.....	3.020	4.467	6.966	6.355	6.128	5.178	3.988	2.922	1.885	1.070	.....
1937	0.998	1.512	3.048	3.737	5.659	6.348	5.686	4.762	3.747	2.271	1.730	1.102	40.600
1938	1.039	1.817	3.359	4.072	4.861	5.119	4.858	5.420	2.961	2.378	1.163	0.727	37.774
1939	1.064	1.518	3.004	3.897	4.136	4.799	3.286	3.533	2.804	1.598	0.718	0.698	31.055
1940	.....	1.006	2.297	3.482	5.167	5.531	4.867	3.588	3.126	2.116	0.119	0.596	.....
1941	0.649	1.089	2.493	4.544	5.680	3.696	3.796	.....	3.742	2.721	0.592	0.911	.....
1942	.....	1.158	3.246	4.386	3.697	4.527	4.471	4.067	3.012	1.522	1.203	1.021	.....
1943	1.001	1.568	2.470	4.352	4.963	5.692	4.259	5.528	3.175	2.151	1.295	.....	.....
1944	.....	.....	2.464	3.850	5.085	5.495	4.678	4.531	5.495	1.571	.861	.....	.....
1945	.....	.....	3.240	3.383	4.682	5.426	4.563	3.845	2.416	1.413	.926	.....	.....

## QUALITY OF WATER

Analytical work to determine the composition of North Carolina's surface waters was first undertaken by the U. S. Geological Survey in 1906. At this time only one station was selected in the Cape Fear River Basin. Daily samples were collected; combined as 10-day composite samples, and analyzed over a period of a year. These analyses are presented herein.

No studies of note were undertaken by either the Department of Conservation and Development or the U. S. Geological Survey until 1925. At this time an agreement between the Water Resources and Engineering Division and the Quality of Water Division of the U. S. Geological Survey was initiated for a co-operative program of work. Under this agreement the personnel of the Surface Water Division of the U. S. Geological Survey was to collect samples as they traveled in connection with their other activities; and the Quality of Water Division of the U. S. Geological Survey agreed to undertake their analyses as its laboratory facilities would permit without cost to the State other than express on the shipment of samples.

Proceeding on that basis, several samples were analyzed during the years 1925-26, and the results of these determinations are presented herein. However, there was a limit to the number of samples that could be handled; and the unavoidable delay in rendering reports often caused embarrassment when the need for the information was urgent.

The increasing frequency with which urgent requests came into the Department for information relative to the quality of the water in almost every section of the State caused Director Wade H. Phillips to take note of the situation early in 1927. Director Phillips effected an agreement with E. E. Randolph, Professor of Chemical Engineering, State College of Agriculture and Engineering, Raleigh, N. C., whereby Dr. Randolph agreed to devote his time during the summer of 1927 to analytical work in connection with Water Analyses. Unfortunately, construction on the State College campus forced Dr. Randolph to work in an improvised laboratory, but too much cannot be said of the diligence and devotion of his application. This work during the summer provided several analyses, which, when added to a number previously analyzed by Dr. Randolph, increased the analyses in the files of the Department.

Again, in 1932 the need of chemical analyses of surface water became pressing. At this time an agreement was entered into with Mr. H. F. Crisco, a post-graduate of the University of North Carolina, to have more analytical work done. His analyses are published in this bulletin. This agreement was carried on for only one school year, as it was not very satisfactory. Daily samples were to be collected; composites of 10-day samples were to be made and analyzed. It will be noted that these were not continuous, and are of very little value as a study during the whole period.

The need for information on the chemical contents of the waters of North Carolina continued to become greater, so in 1943 an agreement was made with the Quality of Water Division of the U. S. Geological Survey for a more complete study of the waters. A laboratory was established in Raleigh and a well planned study was started. Under this agreement the Department of Conservation and Development is to pay one-half the cost of the laboratory and the U. S. Geological Survey is to pay an equal amount. Although this agreement has been in operation for only a few years, much valuable information has been collected and will be found in this publication.



ANALYSES OF WATER FROM CAPE FEAR RIVER AT WILMINGTON, N. C.  
Analyzed by U. S. G. S. - Parts per million

Date	Turbidity	Total iron (Fe)	Silica (SiO <sub>2</sub> )	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K)	Carbonate radiocline (CO <sub>3</sub> )	Bicarbonate radiocline (HCO <sub>3</sub> )	Sulphate radiocline (SO <sub>4</sub> )	Nitrate radiocline (NO <sub>3</sub> )	Chlorine (Cl)	Total dissolved solids	Mean gage height (feet). <sup>a</sup>
Oct. 2-8, 1906.....	11	1.2	10	0.6	5.4	1.0	6.3	0.0	22	2.6	0.0	6.0	64	5.4
Oct. 10-23.....	b16	b .9	b10	b .7	b7.2	b7.6	b67	b .0	b20	b12	b .0	b130	b247	b4.9
Oct. 25 - Nov. 5 .....	11	.5	8.8	.5	4.8	1.0	6.6	.0	20	2.6	.0	6.2	65	4.8
Nov. 6-17.....	12	.6	10	.6	4.6	1.0	6.9	.0	22	2.3	.0	6.5	63	3.6
Nov. 18-27.....	9	.5	10	.5	4.4	.8	5.7	.0	22	2.3	.0	6.0	59	4.0
Nov. 28-Dec. 7 .....	11	.4	11	.4	5.0	1.0	5.8	.0	22	2.8	.0	6.2	52	2.9
Dec. 8-17.....	14	.4	12	.5	5.6	1.2	7.6	.0	29	3.3	.2	6.1	61	4.7
Dec. 18-30.....	19	.9	10	.4	4.6	1.6	6.5	.0	20	2.5	Tr.	...	53	7.6
Dec. 31-Jan. 9.....	11	.8	10	.54	5.0	1.0	6.9	.0	...	3.1	.0	6.5	56	5.8
Jan. 10-20.....	17	.9	8.2	.37	5.0	.6	5.3	.0	22	2.3	Tr.	5.8	44	4.3
Jan. 21-Feb. 1.....	11	.6	10	.4	4.8	1.0	6.8	.0	22	2.8	.0	4.6	52	4.1
Feb. 2-13.....	19	1.0	9.8	.53	4.8	1.0	5.6	.0	27	2.3	1.8	6.1	55	8.9
Feb. 14-27.....	21	1.4	8.6	.61	3.8	.6	4.8	.0	18	2.5	Tr.	6.0	45	10.6
Feb. 28-Mar. 14.....	29	1.5	7.6	.81	3.8	.6	4.9	.0	21	2.8	.3	5.0	47	13.7
Mar. 15-26.....	29	2.3	18	1.8	4.0	.8	6.4	.0	23	2.6	.0	4.6	65	11.3
Mar. 27-Apr. 6.....	27	1.6	11	1.0	4.4	.8	...	.0	22	2.8	.4	5.8	50	6.4
Apr. 8-18.....	42	2.3	...	2.1	4.2	.6	...	...	...	2.5	1.0	...	...	10.1
Apr. 19-30.....	32	1.9	15	1.7	4.4	1.0	6.9	.0	22	2.6	.75	4.6	62	12.5
May 1-11.....	31	1.6	14	1.1	4.4	1.4	6.8	.0	24	1.6	.5	6.1	60	10.9
May 13-24.....	28	1.2	8.0	.35	4.2	1.0	7.7	.0	20	2.0	.5	6.0	52	6.0
May 25-June 6.....	25	1.0	7.0	.28	4.6	.8	7.9	.0	22	1.6	.5	6.6	50	10.4
June 8-21.....	28	1.4	9.2	.75	4.2	1.0	9.0	.0	24	1.6	.5	6.2	58	10.5
June 24-July 4.....	32	1.8	7.2	.65	4.8	1.2	6.1	.0	26	2.0	.3	7.0	62	9.6
July 6-17.....	..	1.2	2.6	.13	6.6	.6	11	.0	34	4.0	.0	4.8	48	5.4
July 19-Aug. 1.....	..	1.4	7.6	.88	5.4	1.8	6.6	.0	26	5.4	Tr.	5.4	57	4.4
Aug. 2-12.....	..	1.5	6.2	.61	6.4	.6	9.1	.0	29	6.9	Tr.	4.8	56	4.0
Aug. 13-24.....	20	1.4	11	1.1	5.5	2.0	12	.0	41	5.8	Tr.	5.4	66	6.6
Aug. 26-Sept. 5.....	20	1.4	8.8	.77	6.5	.8	5.7	.0	24	5.1	Tr.	5.0	61	5.8
Sept. 6-18.....	75	4.0	14	1.8	5.6	1.8	8.5	.0	28	5.3	.5	6.6	68	6.4
Sept. 30-Oct. 9.....	15	1.4	11	.79	8.3	1.8	12	.0	39	5.6	Tr.	7.0	75	3.7
MEAN.....	73	1.3	9.9	.78	5.0	1.5	7.2	.0	25	3.2	.2	5.8	57	...

<sup>a</sup> Gaging station near Fayetteville, N. C., 75 miles above  
<sup>b</sup> Abnormal; omitted from the average.

Location.- At Lookville Power Plant below dam,  $\frac{1}{2}$  mile west of Monoure, Chatham County, and 2 miles downstream from gaging station.

Drainage area.- 1,410 square miles.

Records available.- Chemical analyses; October 1943 to September 1944.

Water temperatures; October 1943 to September 1944.

Extremes, 1943-44.- Dissolved solids: Maximum, 106 parts per million Dec. 11-20; minimum, 38 parts per million Mar. 21-31.

Total hardness: Maximum, 32 parts per million Nov. 21-30, Dec. 1-10; minimum, 12 parts per million Mar. 11-20, 21-31, Apr. 11-20, July 11-20, Aug. 1-10.

Water temperatures; Maximum, 85°F. June 18, 19; minimum, 53°F. Dec. 17, 18, 19.

[Analyzed by Geological Survey . Parts per million]

Date	Mean dis-charge (second-foot) <sup>2</sup>	Tem-perature (° F.)	Sus-pended matter	Oxygen consumed		Color	Silica (SiO <sub>2</sub> )	Iron (Fe)	Cal-cium (Ca)	Mag-nesium (Mg)	So-dium (Na)	Po-tas-sium (K)	Bicar-bonate (HCO <sub>3</sub> )	Sul-phate (SO <sub>4</sub> )	Chlo-ride (Cl)	Fluo-ride (F)	Ni-trate (NO <sub>3</sub> )	Total dissolved solids	Total hard-ness as CaCO <sub>3</sub>
				Unfil-tered	Fil-tered														
Oct. 1-10, 1943-----	69.8	66	19	5.5	5.6	34	6.0	0.07	5.0	2.2	7.4	2.0	28	4.7	7.4	0.0	0.6	55	22
Oct. 11-20-----	19.6	61	22	4.6	3.8	16	5.9	.01	5.2	2.2	7.2		30	4.1	6.0	.0	.4	49	22
Oct. 21-31-----	40.9	57	10	5.4	3.8	15	7.0	.02	5.6	2.4	9.8		37	4.2	7.2	.0	.4	59	24
Nov. 1-10-----	58.6	57	6	6	3.9	23	8.9	.02	6.5	2.7	10		39	6.6	7.4	.0	.8	66	27
Nov. 11-20-----	150	48	6	4.8	3.6	22	16	.02	7.6	2.9	14		40	8.3	14	.0	.4	91	31
Nov. 21-30-----	70.6	45	7	5.0	4.3	27	6.7	.10	7.1	3.4	17		44	7.7	18	.0	.2	88	32
Dec. 1-10-----	97.6	46	8	4.3	3.8	22	8.2	.09	7.5	3.3	21		46	8.1	22	.0	.2	100	32
Dec. 11-20-----	98.6	39	6	4.5	4.0	27	10	.09	7.2	3.2	23		44	8.1	26	.0	.4	106	31
Dec. 21-31-----	705	37	50	5.4	4.5	38	7.1	.15	6.1	2.6	14	2.1	32	6.3	16	.1	.6	80	26
Jan. 1-10, 1944-----	2,228	40	123	7.4	6.0	29	7.4	.07	4.4	1.9	6.8	1.6	16	7.1	8.0	.1	1.5	58	19
Jan. 11-20-----	3,749	38	90	6.0	4.7	29	7.9	.09	3.3	1.5	3.9		10	6.6	4.9	.0	1.2	44	14
Jan. 21-31-----	606	43	22	4.2	3.7	21	9.6	.03	3.6	1.5	5.2		14	6.5	6.2	.0	1.1	45	15
Feb. 1-10-----	1,142	44	20	3.2	2.8	16	10	.06	3.9	1.7	6.3		18	5.6	6.6	.0	.9	49	17
Feb. 11-20-----	6,387	42	112	7.6	6.2	42	6.9	.02	2.9	1.3	3.4		11	5.6	3.0	.0	.9	40	13
Feb. 21-29-----	2,583	49	42	7.6	6.5	30	8.4	.04	2.9	1.4	3.7		13	6.2	3.1	.0	.7	40	13
Mar. 1-10-----	2,622	48	44	6.1	5.2	25	10	.03	3.3	1.5	4.4		15	5.1	4.2	.0	.7	46	14
Mar. 11-20-----	4,896	50	74	6.3	5.2	30	8.4	.02	2.6	1.3	3.5		12	4.9	2.8	.0	.7	39	12
Mar. 21-31-----	6,512	51	60	-----	4.3	22	8.7	.02	2.8	1.2	3.8		13	4.9	2.8	.0	.6	38	12
Apr. 1-10-----	1,641	52	20	3.6	3.6	19	10	.04	3.3	1.4	4.2	.8	16	4.5	3.4	.0	.5	42	14
Apr. 11-20-----	6,861	60	84	6.7	5.1	26	8.6	.04	3.0	1.2	3.7	.9	14	4.6	2.8	.0	.6	41	12
Apr. 21-30-----	1,682	62	36	5.4	6.0	27	11	.08	3.6	1.5	6.2		20	4.2	3.8	.1	.2	46	15
May 1-10-----	2,184	63	62	7.0	6.2	30	10	.12	3.6	1.5	5.5		22	3.6	3.5	.0	.4	46	15
May 11-20-----	576	71	25	6.9	4.4	22	12	.02	4.6	1.7	5.7		24	4.0	4.8	.0	.4	58	18
May 21-31-----	477	78	16	4.6	4.4	16	12	.02	4.7	1.8	5.9		26	3.5	4.8	.0	.4	55	19
June 1-10-----	176	76	20	5.1	4.2	17	11	.07	4.6	2.0	6.0		27	3.1	5.1	.0	.2	55	20
June 11-20-----	149	83	13	4.8	4.7	14	10	.04	4.9	2.1	7.9		29	3.8	7.0	.0	.7	59	21
June 21-30-----	103	82	9	3.9	3.4	23	11	.28	5.3	2.3	9.9		35	3.7	8.0	.0	.4	64	23
July 1-10-----	516	78	82	5.0	4.0	14	9.1	.03	5.0	2.1	8.7	1.4	31	3.7	7.5	.0	.5	59	21
July 11-20-----	7,522	76	269	14	7.2	32	5.7	.04	2.8	1.2	4.1	1.2	13	4.2	3.5	.0	1.4	40	12
July 21-31-----	610	78	38	8.2	7.4	33	8.5	.03	3.1	1.2	3.3	1.1	15	4.1	2.2	.0	.6	42	13
Aug. 1-10-----	2,431	76	182	11	7.6	37	8.3	.04	3.0	1.2	3.2		16	3.3	2.4	.0	.2	40	12
Aug. 11-20-----	307	79	62	8.7	6.6	25	8.9	.02	3.3	1.3	3.7		17	3.2	2.6	.0	.6	42	14
Aug. 21-31-----	124	77	12	6.2	5.2	22	11	.05	4.0	1.6	5.4		23	3.3	3.9	.0	.6	49	17
Sept. 1-10-----	102	80	12	5.3	4.3	22	9.7	.20	4.4	1.8	7.2		27	3.9	5.5	.0	.2	55	18
Sept. 11-20-----	554	74	36	5.0	4.1	19	7.6	.06	4.4	1.6	6.9		26	3.4	6.2	.0	.4	49	18
Sept. 21-30-----	2,169	73	60	9.9	6.8	25	8.1	.04	4.0	1.5	6.0	1.6	24	3.7	6.4	.0	.4	51	16
Average-----	1,657	-----	49	6.2	4.9	25	9.0	.06	4.4	1.9	7.6		24	4.9	6.9	.0	.6	55	19



CAPE FEAR RIVER AT LILLINGTON, N. C.

Location.- At gaging station at bridge on U. S. Highway 15A just downstream from Norfolk Southern Railway bridge at Lillington, Harnett County, and 1 mile downstream from Neill Creek.

Drainage Area.- 3,440 square miles.

Records Available.- Chemical Analyses: November 1944 to October 1945 - Water temperatures: Nov. 1944 to Oct. 1945.

Extremes, 1944-45.- Dissolved solids: Maximum, 92 parts per million June 1-10; 48 parts per million Feb. 20-28, Mar. 1-10.

Total hardness: Maximum, 28 parts per million June 1-10; minimum, 11 parts per million July 1-10.

Water temperatures: Maximum, 85° F. June 18, 20, July 29, August 3; minimum, 34° F. December 20.

Parts per million

Date	Mean discharge (second feet)	Temperature (° F.)	Suspended matter	Oxygen consumed		Silica (SiO <sub>2</sub> )	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Dissolved solids	Total hardness as (CaCO <sub>3</sub> )
				Unfiltered	Filtered													
Nov. 1-10, 1944...	909	56	8	6.2	5.1	15	0.38	4.6	2.0	7.8	1.6	29	5.2	5.6	0.1	0.2	68	20
Nov. 11-20.....	899	54	2	3.6	3.4	13	.81	5.5	2.4	14		43	7.0	7.4	.1	.2	75	24
Nov. 21-30.....	4,300	48	22	4.5	3.4	12	.11	5.1	2.4	15		43	6.9	8.5	.2	.3	75	23
Dec. 1-10.....	4,770	39	32	7.0	5.5	11	.01	3.8	1.7		6.9	22	6.2	4.6	.1	.4	53	16
Dec. 11-20.....	3,469	36	18	5.2	4.1	20	.03	4.3	1.9		6.7	21	7.0	5.5	.1	.7	57	19
Dec. 21-31.....	1,660	39	10	4.2	3.3	17	.07	4.6	1.9	7.9	1.4	27	6.0	6.1	.1	.8	61	19
Jan. 1-10, 1945...	5,547	40	45	6.4	5.2	12	.05	4.6	2.1	6.7	1.2	22	6.7	5.8	.1	.9	59	20
Jan. 11-20.....	3,292	44	22	5.2	3.9	12	.04	4.4	1.8		6.8	22	6.4	5.4	.1	.8	55	18
Jan. 21-31.....	2,022	41	14	3.9	2.9	13	.05	4.9	2.0		7.8	25	6.5	6.5	.1	.8	60	20
Feb. 1-10.....	1,531	37	10	2.8	2.5	14	.04	5.2	2.1	10		33	5.6	7.1	.1	.7	65	22
Feb. 11-19.....	11,480	45	91	6.6	4.8	26	.01	4.7	1.7		6.3	21	6.5	5.1	.1	1.4	56	19
Feb. 20-28.....	12,450	46	46	8.2	5.2	28	.03	4.1	1.5		3.7	14	7.0	3.5	.1	.5	48	16
Mar. 1-10.....	7,264	51	28	5.8	4.7	26	.03	3.8	1.7		4.8	18	5.7	3.9	.1	.5	48	16
Mar. 11-20.....	2,389	53	10	4.0	3.2	20	.11	4.4	1.9		7.2	25	5.9	5.2	.1	.4	56	19
March 21-31.....	2,062	62	6	3.6	3.4	28	.19	5.8	2.0		9.7	36	6.5	6.1	.1	.5	61	23
April 1-10.....	1,231	66	4	4.2	3.7	25	.19	6.0	2.3	9.8	1.5	39	6.2	6.6	.1	.4	65	24
April 11-20.....	1,825	68	21	4.3	3.5	18	.10	6.0	2.3		9.9	38	4.7	6.4	.1	.7	64	24
April 21-30.....	3,313	64	48	8.7	6.6	37	.04	4.7	1.9		8.1	28	4.8	5.6	.1	1.4	62	20
May 1-10.....	1,259	62	18	6.1	5.6	29	.05	5.6	2.3		8.2	32	5.3	5.8	.1	1.4	64	23
May 11-20.....	1,956	65	37	5.0	4.0	21	.05	5.7	2.3	12		41	5.3	6.4	.1	.7	66	24
May 21-31.....	1,405	71	39	5.6	3.4	27	.03	5.4	2.2		8.1	31	5.6	5.4	.2	1.0	67	22
June 1-10.....	613	74	13	8.1	...	20	.03	6.9	2.5	14		46	6.4	7.8	.2	1.7	92	28
June 11-20.....	390	81	8	4.6	3.8	22	.04	5.6	2.4	12		41	6.1	6.6	.2	.7	69	24
June 21-30.....	341	81	8	4.2	3.6	19	.05	6.4	2.5	16	2.0	52	6.6	9.6	.3	.8	86	26
July 1-10.....	577	80	16	4.9	4.2	27	.06	6.3	2.5	15	2.0	50	6.0	8.2	.3	1.1	83	11
July 11-20.....	5,427	80	142	12	11	28	.02	5.2	1.9	9.8		35	5.0	6.5	.2	.1	71	21
July 21-31.....	3,241	80	70	11	8.3	52	.05	3.8	1.4		4.7	19	4.8	3.2	.1	.3	52	15
Aug. 1-10.....	1,115	82	21	12	9.4	39	.04	4.9	1.6		6.4	25	4.6	4.9	.1	.5	61	19
Aug. 11-20.....	1,000	79	17	4.8	4.6	31	.06	5.6	2.3	13		39	5.8	8.9	.3	.8	73	23
Aug. 21-31.....	3,439	76	53	11	10	55	.04	3.6	1.5		4.8	18	4.2	4.0	.1	.7	53	15
Sept. 1-10.....	745	78	44	7.5	7.7	43	.12	4.6	2.0		9.2	29	5.3	6.5	.3	.6	63	20
Sept. 11-20.....	58,820	77	45	7.9	6.3	33	.06	4.4	1.7		7.0	24	5.8	4.8	.1	.7	56	18
Sept. 21-30.....	14,020	78	29	6.8	4.6	20	.03	4.2	1.6		5.1	19	6.6	3.9	.1	1.1	49	17
Oct. 1-10.....	.....	68	21	6.0	5.0	27	.09	4.3	1.7		6.5	24	4.8	4.6	.1	.7	54	18
Oct. 11-20.....	.....	57	9	5.2	4.8	20	.04	4.8	1.9		8.7	28	6.0	5.9	.2	.8	60	20
Oct. 21-31.....	.....	63	5	4.8	4.2	16	.02	5.2	2.1		9.0	32	5.1	6.4	.1	.5	59	22
Average.....	.....	62	29	6.2	5.0	28	.07	5.0	2.0		9.0	30	5.8	6.0	.1	.7	63	21

CAPE FEAR RIVER AT FAYETTEVILLE, N. C.  
Composite of Daily Samples by H. F. Chrisco  
Parts per million

Date	Suspended Matter	Color	Silica SiO <sub>2</sub>	Iron Fe	Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Car-bonate CO <sub>3</sub>	Bicar-bonate HCO <sub>3</sub>	Sul-phate SO <sub>4</sub>	Chlo-ride Cl	Ni-trate NO <sub>3</sub>	Total Dissolved Solids	Total Hardness CaCO <sub>3</sub>
Dec. 15-24, 1932	41	25	11	0.02	3.8	1.7	5.7	0.3	...	15	5.6	4.0	0.18	47	17
Dec. 27-Jan. 5, 1933	45	25	10	.02	3.4	1.4	2.8	1.8	...	12	4.5	3.4	.13	40	14
Jan. 6-15	44	20	11	.03	3.6	1.6	2.8	2.2	...	15	5.6	4.1	.11	42	16
Jan. 30-Feb. 9	22	20	11	.03	3.4	2.0	4.4	1.4	...	17	3.6	4.2	.44	46	17
Feb. 16-25	45	25	11	.08	3.2	1.6	4.4	1.0	...	16	4.5	3.8	.44	41	15
Feb. 28-Mar. 9	22	13	10	.06	3.4	.5	5.5	1.2	...	17	3.2	4.0	.44	42	11
Apr. 1-10	43	22	10	.06	3.7	1.7	5.0	1.2	...	20	2.9	4.0	.33	40	16
Apr. 13-22	115	32	10	.05	3.3	1.7	5.1	1.4	...	19	3.2	3.5	.11	52	15
Apr. 24-May 3	19	25	11	.12	2.9	1.3	6.2	1.2	...	20	3.4	4.3	.44	44	13
June 2-11	...	..	9.0	.02	4.1	2.0	7.9	1.2	...	25	4.5	5.2	1.3	53	19
June 13-22	...	..	9.0	.06	4.3	1.7	7.9	1.6	...	25	4.1	6.0	1.3	55	18

DEEP RIVER AT MONCURE  
Composite of Daily Samples by H. F. Chrisco  
Parts per million

Date	Suspended Matter	Color	Silica SiO <sub>2</sub>	Iron Fe	Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Car-bonate CO <sub>3</sub>	Bicar-bonate HCO <sub>3</sub>	Sul-phate SO <sub>4</sub>	Chlo-ride Cl	Ni-trate NO <sub>3</sub>	Total Dissolved Solids	Total Hardness CaCO <sub>3</sub>
Oct. 25-Nov. 3, 1932	36	37	12	.06	5.7	2.2	2.8	0.52	...	21	2.3	3.0	0.20	56	23
Dec. 9-18	68	35	12	.07	4.2	1.8	2.7	1.1	...	16	4.1	3.0	.88	44	18
Dec. 19-28	43	20	10	.02	3.6	1.6	2.1	2.8	...	13	4.7	3.0	.09	38	16
Jan. 1-9, 1933	31	18	12	.03	3.5	1.5	3.4	1.9	...	16	3.9	3.4	.13	40	15
Feb. 1-9, 1933	18	12	13	.05	4.4	2.5	3.5	1.2	...	23	3.0	4.4	.22	51	21
Feb. 10-19	46	20	11	.1	3.6	1.7	2.7	.8	...	19	3.5	4.0	.11	45	16
Feb. 20-Mar. 2	48	18	12	.06	3.7	1.3	4.4	1.0	...	20	3.3	3.8	.11	49	15



HAW RIVER AT BYNUM  
Composite of Daily Samples by H. F. Chrisco  
Parts per million

Date	Suspended Matter	Color	Silica SiO <sub>2</sub>	Iron Fe	Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO <sub>3</sub>	Bicarbonate HCO <sub>3</sub>	Sulfate SO <sub>4</sub>	Chloride Cl	Nitrate NO <sub>3</sub>	Total Dissolved Solids	Total Hardness
Oct. 28-Nov. 7, 1932.....	71	35	16	0.04	7.8	3.1	7.7	4.2	..	34	9.1	5.4	0.89	83	32
*Dec. 16-25.....	46	35	16	.15	5.3	2.6	26	8.7	33	142	11	41	.22	135	24
Feb. 2-10, 1933.....	24	5	15	.08	4.5	2.2	5.7	1.8	..	29	4.3	4.2	.44	58	20
Feb. 11-20.....	69	15	13	.1	4.3	2.4	3.7	1.1	..	27	5.6	3.8	.11	50	21
Feb. 21-Mar. 3.....	40	15	14	.1	4.1	2.0	3.9	1.2	..	23	5.2	3.8	.22	53	18
Apr. 1-10.....	40	12	15	.04	5.3	2.5	8.0	1.6	..	35	3.8	5.0	.22	57	30
Apr. 11-20.....	128	17	10	.05	4.9	2.3	6.7	1.5	..	30	3.8	3.9	.11	49	22
Apr. 21-30.....	36	15	16	.06	5.0	2.2	7.4	1.7	..	32	3.4	4.5	Trace	55	22
June 1-10.....	...	..	11	.03	4.6	2.2	7.9	2.0	..	25	4.7	4.5	1.3	54	21
June 11-20.....	...	..	15	.03	6.9	3.1	15	2.4	..	45	7.6	11	.66	89	35
June 21-30.....	...	..	15	.1	7.2	3.1	20	2.4	..	52	8.2	15	.44	101	31

\*This sample had apparently been polluted to a more than normal degree by industrial wastes.

PUBLIC WATER SUPPLIES  
in  
CAPE FEAR RIVER BASIN  
Parts per million

Location	Date of Collection	Suspended Matter	Color	Silica SiO <sub>2</sub>	Iron Fe	Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO <sub>3</sub>	Bicarbonate HCO <sub>3</sub>	Sulfate SO <sub>4</sub>	Chloride Cl	Fluoride F	Nitrate NO <sub>3</sub>	Total Dissolved Solids	Total Hardness CaCO <sub>3</sub>	Ph Authority
Burlington.....	1-13-28	2	7	16	0.23	2.2	1.3	3.0	0.3	..	14	4.0	1.2	..	0.2	43	14	.. Randolph
Fayetteville.....	6-29-29	0	8	22	.15	30	.5	12	1.7	12	6.1	26	12	..	.3	123	77	9.4 Bd. of Health
Fort Bragg.....	1- 7-30	7	0	7.1	.12	1.3	.7	16	1.0	..	32	13	3.0	..	.0	60	6	do
Greensboro.....	5-25-31	..	..	13	.02	7.6	2.1	3.9	1.5	..	21	17	1.7	..	.5	56	28	U. S. G. S.
do .....	5-11-44	..	2	10	.03	13	1.9	3.5	..	5.9	21	17	2.0	0	.3	69	40	do
High Point.....	7-27-27	3	5	11	.3	6.6	2.1	2.5	1.1	..	25	6.4	4.0	..	.2	60	25	Randolph
do .....	4-28-44	..	1	10	.02	10	1.9	5.1	..	..	24	15	2.9	0	.4	65	33	U. S. G. S.
Robbins.....	11-18-44	..	1	9.4	.02	9.6	1.2	5.3	..	..	13	20	6.2	.1	.0	62	29	do
Wilmington.....	7-25-27	3	5	17	.5	6.2	1.4	5.5	1.0	..	24	4.0	8.0	..	.1	71	21	7.2 Randolph
do .....	5-26-31	..	..	8.4	.02	10	1.3	3.7	.9	..	22	17	3.5	..	.5	59	30	U. S. G. S.

MISCELLANEOUS ANALYSES IN CAPE FEAR RIVER BASIN  
Parts per million

Source and Location	Date of Collection	Suspended Matter	Color	Silica SiO <sub>2</sub>	Iron Fe	Calcium Ca	Magnesium Mg	Sodium Na	Potassium K	Carbonate CO <sub>3</sub>	Bicarbonate HCO <sub>3</sub>	Sulfate SO <sub>4</sub>	Chloride Cl	Fluoride F	Nitrate NO <sub>3</sub>	Total Dissolved Solids	Total Hardness CaCO <sub>3</sub>	Authority
Bear Creek at Robbins.....	10-30-44	2	39	8.2	.04	2.2	0.9	4.7	1.2	...	16	1.7	3.2	...	0.1	36	9	U. S. G. S.
Big Coharie Creek near Ingold.....	8-16-27	18	55	5.2	.4	2.3	3.2	4.3	1.2	...	15	3.6	9.0	...	.2	44	19	Randolph
Big Rockfish Creek near Hope Mills.....	11-9-44	6	26	4.4	.04	.4	.4	3.4	...	...	6.0	1.3	2.5	...	.3	19	3	U. S. G. S.
Cape Fear River below C. P. & L. Steam Plant.....	.....	50	12	9.5	.32	5.1	.9	4.6	.8	...	26	2.0	3.0	...	.2	53	16	Randolph
Cape Fear River at Elizabethtown.....	10-31-29	18	50	12	.54	5.8	1.8	3.8	1.5	...	18	8.1	5.0	...	.2	56	22	Bd. of Health
Cape Fear River at Lock 3.....	11-4-44	5	35	10	.32	2.8	1.4	5.1	...	...	14	4.7	4.9	...	.8	46	13	U. S. G. S.
Deep River near N. C. Hwy. 75.....	.....	30	8	16	.35	5.5	2.6	2.9	.7	...	22	2.8	2.3	...	.2	52	17	Randolph
Deep River at Rameur.....	11-2-44	10	44	16	.05	6.0	.8	7.6	...	...	31	6.9	5.8	...	1.8	74	26	U. S. G. S.
Deep River near Randleman.....	8-12-44	11	17	15	.04	12	4.0	64	...	...	53	21	80	...	8.0	242	46	do
Deep River near Sanford.....	6-30-27	50	20	12	.4	3.1	.9	3.0	.7	...	14	3.7	3.1	...	.8	44	11	Randolph
East Fork Deep River near High Point.....	8-12-44	8	3	27	.03	7.8	3.2	7.5	...	...	52	2.1	2.5	0.1	.3	78	33	U. S. G. S.
Eno River at Hillsboro.....	9-26-44	21	18	16	.06	6.0	2.1	6.2	...	...	28	5.7	5.0	.1	1.0	64	24	do
Haw River at Bynum Mfg. Co. Mill.....	6-24-27	50	15	13	.6	5.1	1.1	2.7	.7	...	19	3.3	7.5	...	.3	55	17	Randolph
Haw River at Haw River.....	11-30-25	33	25	20	.02	7.3	2.9	12	2.3	...	38	11	10	...	2.5	96	30	U. S. G. S.
do	9-26-44	36	14	15	.02	5.5	2.1	17	...	...	41	11	8.0	.3	2.5	87	22	do
Haw River near Moncure.....	10-11-45	11	24	15	.03	6.6	2.7	11	...	...	37	8.6	7.1	.3	2.0	80	28	do
Haw River at N. C. Hwy. 10.....	.....	50	10	6.0	.32	6.5	2.4	10	1.5	...	30	7.5	12	...	1.0	78	26	Randolph
Haw River near Pittsboro.....	4-13-29	8	11	14	.06	15	3.5	9.1	...	...	45	14	14	...	.01	115	37	Bd. of Health
do	10-19-44	6	17	16	.02	5.8	2.4	21	...	...	54	9.5	11	.3	.3	95	24	U. S. G. S.
Horsepen Creek near Battle Ground.....	8-12-44	18	16	23	.19	7.4	3.2	6.5	...	...	47	2.5	2.5	.1	1.1	74	32	do
Lake Rim near Fayetteville on Hwy. 24.....	5-8-29	6	91	6.2	.25	3.7	.6	6.2	...	...	3.7	6.8	10	...	.02	37	12	Bd. of Health
Little River at Vass.....	.....	1	10	7.6	.2	4.0	1.2	6.5	1.2	...	15	7.8	8.0	...	.25	52	15	Randolph
Little Rockfish Creek near Hope Mill.....	11-9-44	13	28	4.6	.19	.6	.5	3.8	...	...	7.0	1.7	2.9	...	.3	22	4	U. S. G. S.
Lower Little River at Linden.....	11-10-44	2	34	5.5	.01	1.0	.6	4.1	...	...	7.0	2.1	2.9	...	2.2	28	5	do
Lower Little River at Manchester.....	6-29-29	Slight	23	5.4	.8	5	.3	3.6	2.2	...	6.1	2.8	11	...	.3	37	11	Bd. of Health
North Buffalo Creek near Greensboro.....	10-23-44	53	33	14	.02	14	2.0	159	10	58	189	46	73	...	.2	466	43	U. S. G. S.
North East Cape Fear River.....	.....	42	70	9.8	.5	5.5	2.2	13	2.0	...	34	5.6	13	...	1.5	85	23	Randolph
Reedy Fork near Gibsonville.....	10-23-44	31	22	11	.10	3.6	1.6	4.6	...	...	22	3.8	2.2	.1	.2	46	16	U. S. G. S.
Reedy Fork near Summerfield.....	6-27-27	28	12	14	.35	4.8	2.7	4.2	.8	...	28	4.0	4.4	...	.45	64	23	Randolph
Rockfish Creek near Lakefield.....	5-22-45	4	26	4.1	.04	1.6	.3	1.8	...	...	6.0	1.0	2.1	...	.4	19	5	U. S. G. S.
South Buffalo Creek S. W. of Pomona Mills.....	6-27-27	26	13	13	.4	5.1	2.5	4.5	.7	...	30	3.2	5.2	...	.36	65	22	Randolph
Stony Creek at Burlington.....	6-30-27	22	10	11	.3	7.5	1.1	3.0	.5	...	24	4.0	5.0	...	.27	58	23	do
West Fork Deep River near High Point.....	11-27-25	25	30	25	.4	5.8	2.3	4.9	.9	...	37	2.6	2.1	...	.12	67	24	U. S. G. S.
do	2-9-26	23	65	24	1.1	4.7	2.6	4.0	.7	...	28	3.8	2.0	...	.42	67	22	do
do	8-12-44	21	13	22	.14	5.6	2.2	7.3	...	...	40	2.0	2.4	.1	.5	64	23	do
White Lake 75 feet from shore.....	7-8-27	8.5	5	18	.1	6.1	1.5	1.9	.8	...	0.0	6.8	13	...	.4	49	14	Randolph



EXPLANATION  
(Piedmont area)

**NEWARK GROUP:** Sandstones, arkoses, shales, mudstones, and conglomerates, consolidated by compaction and cementation. Ground water moves chiefly through fractures and joints. Small yields at most places, larger yields are obtained where the rock has more fractures and joints. Yields of many wells decline greatly with continued use. Continuous yields of 25 to 30 gallons a minute available only at favorable locations. Water generally soft but that from some wells is hard.

**GRANITE:** Light-gray porphyritic, and pink coarse-grained, massive to greatly sheared rock. Ground water occurs in shear zones and fractures. Massive granite yields small amounts of water, sheared phases yield larger amounts. Wells at favorable locations yield 30 to 50 gallons a minute. Water generally soft or only slightly hard.

**SLATE AND SCHIST:** Metamorphosed tuffs, breccias, and shales, gray, blue, green, and brown in color. Schistosity and cleavage slightly to highly developed. Greensands and other schists are among the best aquifers in the Piedmont. Yields of 50 to 100 gallons a minute are not uncommon. Silty tuffs and breccias yield much less. The water at most places is soft, and at some it has a high iron content.

**GNEISS:** Quartz-mica gneiss, quartz-mica-feldspar gneiss, and mica schist, chiefly of sedimentary origin. Banding and schistosity usually well developed. Yields of 40 to 60 gallons a minute are obtained where the schistosity, cleavage, and shear planes are well developed. Small yields are obtained from wells drilled at unfavorable locations. The water generally is soft and has a low iron content.

**PLEISTOCENE DEPOSITS:** Arenaceous clays, argillaceous sand, and some clean sand and gravel. Deposits generally are 20 to 30 feet thick. Many domestic supplies obtain satisfactory yields. Larger supplies are available by using groups or batteries of wells. Supplies up to 1,000,000 gallons a day available at some places by using large groups of shallow wells. Water soft at most places. Water from many wells contains considerable iron.

**DUPLIN MARL:** Calcareous clays, sandy marls, sands, and limestones. Strata a few feet to about 125 feet thick. Unimportant as an aquifer in area of outcrop but furnishes important supplies along the coast of Onslow County and northward where yields of several hundred gallons a minute can be obtained. Water generally hard, at places high in iron.

**TRENT MARL:** Sandy marls, sands, limestone, and coquina. Strata range from a few feet to more than 100 feet thick; dip southeast about 10 feet per mile. Large quantities of water are obtained from wells in the Trent marl. Yields of several hundred gallons a minute available at many places. Water is hard, contains iron at places.

**CASTLE HAYNE MARL:** Sandy marls, sandy limestones, and limestones. The formation is thin in the area of outcrop but becomes thicker to the southeast. Strata dip southeastward about 15 feet per mile. Large amounts of water are obtained from wells in southeastern Onslow, Pender, New Hanover, and Brunswick Counties. Many wells yield several hundred gallons a minute with small drawdowns. Water is generally hard.

**PEEDEE FORMATION:** Marine clays, sands, marls, and limestones dipping southeastward 10 to 15 feet per mile. Yields water to drilled wells in area of outcrop and in area to southeast except near coast where, at some places, the water is brackish. Yields of 100 to 500 gallons a minute are available at many places. Water moderately hard to hard.

**BLACK CREEK FORMATION:** Black laminated clays and interbedded fine-grained gray sands dipping 10 to 15 feet per mile to the southeast. Yields moderate to large supplies to many wells in area of outcrop and in area extending 20 miles to southeast. Many wells yield 100 to 300, some 500 to 800 gallons a minute. Water generally soft, except that from upper part of formation which is moderately hard.

**TUSCALOOSA FORMATION:** Lenticular deposits of sand, gravel, and clay. Strata dip southeastward 10 to 20 feet per mile and are a few feet to nearly 300 feet thick. Yields water to many wells from tall zone southeastward nearly to Elizabethtown. Wells will yield several hundred gallons a minute at many places. Soft water, low in dissolved solids, at places contains considerable iron.

GEOLOGIC MAP  
of  
CAPE FEAR RIVER BASIN

scale  
10 0 10 20 30 miles

⊙ Municipal ground water supply

⊕ Military Base ground water supply

# Ground water in the Cape Fear River Basin, North Carolina

By M. J. Mundorff<sup>1/</sup>

## INTRODUCTION

The present program of investigations of the ground-water resources of North Carolina was begun in August 1941 as a cooperative project of the U. S. Geological Survey and the North Carolina Department of Conservation and Development. The project is under the direction of Dr. A. N. Sayre, Geologist in Charge, Division of Ground Water, U. S. Geological Survey, and Dr. J. L. Stuckey, State Geologist of North Carolina.

Detailed field work, including the collecting of all important hydrologic data and reconnaissance mapping of the geology, has been completed in 18 counties and a large amount of information has been obtained in other areas. During the war a number of investigations were made for military establishments and in defense areas. Since the war, investigations have been made of the ground-water conditions in the vicinity of several cities. Figure 1 shows the areas and places where ground-water investigations have been made. Publications of the Department of Conservation and Development that give information on ground water include: Information Circular 3, Selected well logs in the Coastal Plain of North Carolina; Information Circular 6, A possible new source of ground-water supply in the Elizabeth City area, North Carolina; Bulletin 47, Progress report on ground water in North Carolina; Bulletin 51, Ground water in the Halifax area, North Carolina; and Hydrologic data on the Neuse River Basin, 1866-1945.

Ground water is an important natural resource in the Cape Fear River Basin. It is the source of supply for 30 cities and towns and several military establishments. Nearly all domestic water supplies and many industrial supplies are obtained from wells or springs.

Although detailed field investigations have been completed in only a part of the basin, a great deal of basic data and other information has been obtained for all parts of the area. This report summarizes that data and information.

The Cape Fear Basin lies in two major physiographic provinces which differ greatly in topography and geology and in their ground-water resources. The headwaters of the Cape Fear River, including Deep and Haw Rivers, are in the Piedmont province. The lower reaches of the river and some of its tributaries, such as Little River, South River, Black River, and Northeast Cape Fear River, are in the Coastal Plain province. The two provinces are separated by a belt known as the Fall Zone in which the geology and topography of the Piedmont gives way to the geology and topography of the Coastal Plain.

## Occurrence of ground water

The source of ground water is precipitation as rain or snow. The water falling on the earth's surface enters and moves through the soil. In the unconsolidated sedimentary formations of the Coastal Plain it moves through the openings between the grains of soil, sand, and clay. In the crystalline and consolidated rocks of the Piedmont the water moves largely through joints and other fractures and along cleavage planes.

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Ground water moves under the influence of gravity and the point of discharge is always at a lower level than the point of recharge. In North Carolina recharge occurs in interstream areas and the natural discharge is into streams, lakes, swamps, and the sea.

Rain falling on the surface percolates downward through the earth until it reaches the zone of saturation, below which the pores and openings of the rock are completely filled with water. The surface of the zone of saturation is called the water table, and, in the Cape Fear River basin, it generally is from a few feet to about 60 feet below the land surface. Discharge of ground water is a continuous process though the rate varies from time to time. Thus the ground-water levels are receding continually except when recharge from precipitation exceeds the rate of depletion and the water levels rise. For this reason the water table is not a fixed surface but is continually fluctuating.

Fluctuations of the water table.— Because the source of the ground water is precipitation, the water table fluctuates with the rainfall. The correlation of ground-water level with rainfall is complicated by a number of factors. The proportion of rainfall that becomes direct stream runoff, evaporates, or reaches the water table is determined by the intensity and duration of the rainfall, the character and condition of the surface material on which the rain falls, and the rate of evaporation and transpiration of the water by vegetation. In North Carolina the water table generally recedes during the summer and autumn months in spite of heavy rainfall, because of the large amount of water lost by evaporation and transpiration. In the winter and spring months the water level generally rises, although rainfall is less, because evaporation and transpiration losses are greatly reduced.

Observations of the fluctuations of the water level have been made at one time or another on 26 wells in the basin, and are being continued at the present time on 12 of them. The records of all measurements up to and including 1944 are contained in U. S. Geological Survey water-supply papers 777, 817, 840, 845, 886, 907, 937, 945, 987, and 1017. Records for subsequent years are in course of publication. The depth to the water level below the "land-surface datum," a precise datum approximating the land surface near the end of the month, in 13 of these wells, including the 12 wells being maintained at the present time, is given in the following tables:

# Alamance County

A-1. Governor Holt well. Near Haw River, Dug well; depth 61 feet; diameter 7 feet.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	21.50
1935	21.44	22.03	17.17	19.48	19.52	-----	-----	25.50	25.60	25.00	24.30	18.50
1936	18.14	18.96	16.39	17.44	20.42	22.68	24.02	25.09	25.54	25.28	25.54	21.78
1937	15.80	18.08	19.68	17.86	20.34	22.76	23.60	23.72	24.00	25.25	24.38	24.56
1938	22.50	23.18	22.50	22.08	23.26	22.42	17.38	21.36	23.11	24.35	22.54	20.45
1939	20.05	16.25	15.57	17.42	18.94	20.98	20.42	19.70	22.43	23.58	23.88	23.16
1940	23.37	19.14	19.88	20.61	20.69	21.55	23.30	21.43	23.35	24.68	21.98	21.16
1941	21.00	21.98	20.48	20.77	22.71	22.72	23.06	24.78	25.48	25.78	26.07	26.13
1942	26.18	25.08	23.15	24.37	22.59	21.98	23.83	24.61	25.29	23.83	23.38	20.10
1943	17.14	20.09	18.66	19.37	21.26	21.98	21.98	24.20	23.46	24.69	25.09	24.22
1944	21.90	19.30	16.10	18.01	19.85	22.04	20.97	23.15	23.00	21.40	20.50	21.64
1945	21.32	17.19	19.66	20.44	21.92	23.45	23.28	24.16	20.43	22.36	23.05	17.39

# Forsyth County

F-19. W. C. Mitchel place. One-half mile south of Kernersville. Dug well; depth 48 feet; diameter 36 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	44.66	44.63
1935	44.59	44.42	44.31	44.15	43.93	43.73	43.55	43.52	43.61	43.77	43.98	44.20
1936	44.32	44.36	44.22	44.03	43.69	43.58	43.56	43.56	43.68	43.86	43.98	44.02
1937	44.05	43.87	43.59	43.37	43.11	42.94	42.76	42.76	42.73	42.71	42.80	42.88
1938	42.97	42.93	43.02	42.98	42.95	42.94	-----	42.98	42.93	43.16	43.31	43.38
1939	43.52	43.58	43.36	43.37	43.21	43.04	42.96	42.96	42.89	42.77	42.91	43.06
1940	43.83	43.34	43.37	43.41	43.05	43.17	43.11	42.19	42.23	42.73	42.82	42.92
1941	42.82	42.94	42.67	42.93	43.23	43.06	43.10	43.23	43.20	43.32	43.65	43.53
1942	44.03	44.23	44.38	44.45	44.63	44.70	44.73	44.73	44.71	44.93	44.87	44.80
1943	45.81	44.63	44.37	44.51	43.91	43.93	43.53	43.91	43.48	43.52	43.73	43.93
1944	43.60	44.23	43.53	44.23	44.43	44.61	44.43	43.73	43.82	43.91	43.71	44.00
1945	43.88	43.33	43.75	43.71	43.65	43.74	43.48	43.66	43.76	43.73	43.93	43.59



# Guilford County

G-2. Lindale Dairy Corporation. About 1.5 miles northeast of High Point city limits. Dug well; depth 39 feet; diameter 18 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	27.57	27.76	27.65
1935	27.08	26.68	25.93	25.06	24.72	24.89	24.88	25.33	25.50	26.12	26.52	26.90
1936	26.39	25.85	25.18	24.54	24.95	25.56	26.09	26.31	26.78	26.76	27.17	26.81
1937	24.72	24.05	24.28	24.90	25.17	25.80	26.26	26.74	26.88	27.17	27.38	27.49
1938	26.86	26.74	26.57	27.01	27.52	27.80	27.84	27.70	28.06	28.46	28.73	28.65
1939	27.85	26.40	25.34	25.50	26.02	26.41	26.54	26.05	26.34	26.96	27.50	28.02
1940	27.99	27.49	27.16	27.32	27.60	27.40	27.13	26.79	26.89	27.36	27.50	27.43
1941	26.78	26.92	26.92	26.71	27.20	27.70	27.64	27.98	28.45	28.77	29.21	29.60
1942	29.94	29.95	29.20	29.15	29.09	28.94	28.84	28.73	28.93	29.16	29.39	28.93
1943	27.99	26.98	26.19	26.09	26.32	26.65	26.64	27.08	27.32	27.86	28.35	28.81
1944	28.53	27.74	26.38	25.63	25.61	26.14	26.44	26.82	27.23	27.53	27.73	27.58
1945	27.20	26.33	25.81	26.12	26.51	27.05	27.51	27.86	27.56	27.73	28.04	27.46
1946	26.30	25.45	25.63	25.96	25.87	26.05	26.39	26.75	27.06	27.53	27.98	28.42

# Guilford County

G-4. W. O. Atkins. Near Colfax. Dug well; depth 34 feet; diameter 18 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	31.59	31.79	31.94
1935	31.84	31.51	31.15	30.49	30.00	29.70	29.80	30.17	30.73	31.16	31.71	32.09
1936	31.70	31.02	30.31	29.57	28.81	28.80	29.31	29.65	29.92	30.23	30.35	30.50
1937	29.60	28.75	28.15	27.85	27.61	27.65	28.01	28.47	29.07	29.45	29.58	29.79
1938	29.80	29.66	29.51	29.32	29.49	29.72	-----	29.50	29.75	30.09	30.50	30.66
1939	30.62	30.27	29.07	29.32	28.26	29.45	29.59	29.84	29.99	29.39	30.57	29.87
1940	30.52	30.56	30.06	29.67	29.07	29.22	29.23	29.18	29.29	29.66	29.27	30.16
1941	30.05	29.92	29.93	28.17	29.25	29.70	29.73	29.85	29.83	29.95	30.83	30.77
1942	31.85	31.65	31.92	31.53	31.15	31.10	30.71	30.55	30.71	31.15	31.51	31.73
1943	31.95	31.05	30.25	29.35	29.24	29.30	30.13	30.25	29.74	29.93	30.70	31.25
1944	30.92	30.27	30.05	29.53	29.75	30.05	29.93	29.35	29.55	29.59	30.65	30.70
1945	30.63	29.05	29.45	29.65	29.45	29.51	29.65	29.63	29.75	30.54	29.65	29.70
1946	29.95	31.15	31.07	28.40	30.13	30.05	28.35	28.54	29.20	31.41	30.32	30.80

# Guilford County

G-5. Isaac Tonkins. Near Groomtown. Dug well; depth 54 feet; diameter 48 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	46.17	46.19	46.13
1935	46.11	45.96	45.73	45.64	45.54	45.51	45.47	45.56	45.68	45.85	45.87	46.06
1936	46.04	45.94	45.72	45.56	45.48	45.55	45.42	45.19	45.52	45.48	45.51	45.56
1937	45.15	45.13	44.90	45.01	44.93	45.03	45.14	45.35	45.52	45.27	45.51	45.62
1938	45.66	45.70	45.72	45.66	45.74	45.72	-----	45.48	45.50	45.59	45.69	45.81
1939	45.81	45.63	45.21	45.09	45.09	45.08	45.06	45.10	45.18	45.22	45.40	45.46
1940	45.58	45.62	45.69	45.59	45.06	45.52	45.55	45.46	45.52	45.58	45.59	45.48
1941	45.47	45.49	45.41	45.47	45.49	45.60	45.55	45.59	45.68	45.80	45.82	45.55
1942	45.70	45.58	46.08	45.90	46.00	45.80	46.05	46.10	46.01	-----	46.24	-----
(Not measured since 1942)												

# Guilford County

G-7. E. J. Welch. In High Point. Dug well; depth 28.5 feet; diameter 34 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	22.80	22.89	22.98
1935	23.08	23.18	22.74	21.63	22.11	22.34	22.51	22.60	22.70	22.80	22.91	23.00
1936	21.27	21.15	21.15	20.65	21.83	22.20	22.39	22.50	22.60	22.68	22.77	22.67
1937	19.02	21.11	21.66	21.93	22.11	22.28	22.42	22.55	22.67	22.75	22.86	23.00
1938	23.17	23.23	23.28	23.33	23.36	23.41	-----	23.34	23.37	23.35	23.40	23.18
1939	23.10	21.53	21.53	21.82	19.69	18.32	22.45	22.40	22.40	22.62	24.68	24.90
1940	24.39	22.65	21.87	22.19	22.02	21.81	22.23	22.22	22.41	22.58	22.01	22.35
1941	22.20	22.18	21.52	20.99	21.96	22.95	22.68	24.00	24.96	25.70	26.35	26.40
1942	26.08	26.75	24.70	24.37	24.20	23.99	22.45	22.60	22.72	22.89	23.02	24.14
1943	20.65	21.42	20.45	20.66	21.49	22.37	22.50	22.60	22.71	22.77	22.99	23.10
1944	23.27	21.27	19.90	21.28	21.98	22.30	22.38	22.56	22.72	22.43	22.90	23.08
1945	22.29	20.12	20.03	20.52	21.22	22.35	23.19	22.73	22.88	22.96	23.00	20.67
1946	20.72	21.00	20.85	19.65	20.10	20.10	21.67	22.16	23.15	22.81	22.89	22.99



Guilford County

G-8. Welch place. 1304 E. Lexington Avenue, High Point. Dug well depth 34 feet; diameter 32 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	28.26	28.60	27.75
1935	26.13	25.38	22.08	21.89	22.66	23.84	24.16	25.43	26.23	27.00	27.47	27.69
1936	23.82	21.43	20.68	18.74	22.57	24.20	25.30	25.94	26.79	26.24	26.88	25.52
1937	19.38	20.07	21.11	21.54	22.59	24.16	25.48	25.87	26.35	26.51	26.58	26.40
1938	25.23	25.23	24.47	25.23	26.10	26.77	-----	27.05	27.97	28.46	28.66	27.61
1939	26.90	23.02	20.97	22.56	26.08	24.21	26.13	26.55	26.69	26.79	26.90	27.02
1940	27.15	25.20	25.96	25.02	24.22	25.41	26.36	26.16	27.00	28.00	27.19	27.12
1941	25.87	26.42	26.66	25.58	26.27	26.45	26.40	26.60	26.72	26.89	27.01	27.12
1942	27.30	27.42	25.72	26.21	25.51	26.10	28.62	28.99	29.80	30.52	30.78	29.76
1943	27.60	26.11	25.05	25.12	26.03	26.59	27.28	28.30	29.28	30.04	30.47	30.82
1944	29.93	28.34	23.90	22.60	24.10	25.67	26.39	27.25	28.50	28.22	28.60	27.28
1945	27.17	25.07	25.67	26.14	26.35	26.51	26.62	26.76	26.80	26.15	36.37	24.60
1946	24.91	21.30	23.15	26.10	26.18	26.38	26.52	26.60	26.69	27.85	28.29	28.55

Guilford County

G-12. John Blair estate. At High Point. Dug well; depth 37 feet; diameter 30 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	33.44	32.88
1935	32.25	32.00	31.51	30.75	30.48	30.84	30.99	31.60	31.18	32.64	33.01	33.21
1936	31.35	30.05	29.37	28.13	28.63	29.73	30.69	30.89	31.46	30.80	31.14	30.71
1937	28.73	27.84	27.81	28.12	28.37	29.47	30.89	31.39	31.91	32.27	32.57	32.89
1938	32.13	32.18	32.01	32.71	33.28	33.31	-----	34.22	34.69	35.26	35.39	34.79
1939	34.25	32.79	31.24	31.00	31.17	32.17	32.72	32.85	33.48	34.09	34.72	35.15
1940	34.75	33.74	32.80	32.57	32.31	32.26	32.65	32.67	33.17	33.13	33.80	33.61
1941	33.00	36.13	35.72	36.15	36.22	36.28	36.29	36.20	35.98	36.28	36.00	35.96
1942	-----	-----	-----	-----	-----	-----	33.83	34.29	34.79	35.29	35.53	35.08
1943	34.42	33.28	32.69	31.79	31.52	32.18	32.13	32.75	34.20	34.29	35.21	35.45
1944	34.56	33.80	32.41	31.34	31.05	31.40	31.27	31.70	32.05	32.24	32.19	31.92
1945	32.10	30.95	31.28	30.10	30.53	30.79	32.87	32.48	32.79	32.81	33.53	33.68
1946	33.70	29.80	29.50	31.72	31.64	32.68	32.70	32.30	32.72	33.14	33.47	33.68

# Guilford County

G-14. Clodfelters Dairy. About 2 miles southeast of High Point. Dug well; depth 235 feet; diameter 24 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	18.38	17.95
1935	17.34	16.62	15.16	14.56	14.82	15.49	16.13	16.72	17.28	17.68	18.00	18.42
1936	15.60	13.99	13.59	11.39	13.16	14.36	15.23	15.66	16.18	15.54	16.06	15.15
1937	11.08	11.52	12.51	13.15	13.53	14.24	15.08	15.54	15.88	15.88	16.40	15.74
1938	15.54	15.60	15.54	16.11	16.63	16.89	-----	16.87	17.35	17.62	17.42	16.36
1939	15.65	13.20	11.37	12.57	13.86	14.49	15.16	15.45	16.12	16.43	16.97	16.81
1940	16.90	15.62	15.19	15.20	14.00	14.73	15.40	14.79	15.30	16.13	15.49	15.12
1941	14.85	15.22	14.66	14.91	15.71	16.40	16.68	18.20	17.60	17.91	18.26	18.52
1942	18.84	17.04	16.38	17.32	17.50	17.80	18.25	18.60	18.94	19.05	19.40	18.90
1943	16.96	16.32	15.68	14.77	15.15	15.85	15.78	16.72	17.01	17.05	17.70	18.04
1944	16.78	15.44	12.68	11.38	12.41	13.50	13.50	14.19	15.17	14.68	15.10	14.80
1945	14.77	12.98	13.84	13.58	14.14	13.89	15.40	14.73	13.96	14.15	15.28	15.40

# Orange County

O-1. McCauley well at Chapel Hill. Dug well, depth 47.7 feet; diameter 36 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1931	-----	-----	-----	-----	-----	-----	-----	-----	-----	5.74	5.18	4.96
1932	5.80	6.37	7.05	7.28	7.04	6.79	6.02	5.40	4.59	4.45	4.72	5.81
1933	6.88	7.54	7.87	7.96	7.73	7.10	6.47	6.11	5.73	5.00	4.30	3.84
1934	3.35	2.95	3.42	4.64	5.14	5.49	5.42	5.34	5.43	5.15	5.12	5.59
1935	6.27	6.49	7.08	7.90	8.14	7.78	6.64	6.02	5.93	5.21	4.92	5.03
1936 through 1938 missing record												
1939	5.20	6.85	8.43	8.64	8.58	8.13	7.70	7.66	7.43	6.64	5.95	5.47
1940	5.12	5.60	6.01	6.29	6.37	5.93	5.18	4.65	4.09	3.40	2.75	2.45
1941	-----	3.10	3.52	4.22	4.46	4.18	3.98	3.39	2.84	2.47	2.11	1.80
1942	1.59	1.49	1.59	1.51	1.45	1.28	1.20	1.25	1.17	1.24	1.41	2.10
1943	3.16	3.89	4.55	5.18	5.48	5.35	5.06	4.39	3.62	3.04	2.26	1.80
1944	1.62	2.19	3.37	4.58	5.06	4.87	4.41	4.03	3.79	4.22	4.21	4.70
1945	4.99	5.42	6.09	6.14	5.88	5.27	5.35	5.33	6.81	6.88	6.43	6.75



Randolph County

R-20. Dr. Bush place. Archdale. Dug well; depth 27 feet; diameter 30 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	23.21
1935	22.60	22.14	21.53	20.64	20.39	20.51	21.13	21.63	22.27	22.78	23.26	23.49
1936	22.43	21.55	21.04	20.07	20.09	21.78	21.52	21.74	22.05	21.42	21.49	21.08
1937	19.63	19.41	18.96	18.76	18.63	19.16	20.02	20.66	21.31	21.65	21.85	21.89
1938	21.34	21.09	20.91	20.90	21.45	21.95	-----	21.69	22.24	22.65	23.02	22.85
1939	22.01	20.86	19.70	19.55	19.77	21.74	21.15	21.60	21.91	22.29	23.00	23.28
1940	23.14	22.48	21.94	21.62	21.00	21.22	21.60	21.81	22.20	22.83	22.92	22.97
1941	22.25	21.91	21.66	21.29	21.54	22.18	22.60	23.20	23.62	24.19	24.58	24.81
1942	25.10	24.54	24.30	23.90	23.90	23.95	24.41	24.76	25.19	25.56	25.65	25.40
1943	24.46	23.74	23.40	26.65	22.37	22.50	22.50	22.54	22.50	23.95	24.32	24.68
1944	24.43	23.97	22.44	21.90	21.72	22.08	22.11	22.99	23.27	23.90	23.67	23.72
1945	23.70	22.89	22.68	22.05	21.93	21.88	23.20	22.77	23.95	23.75	24.24	24.42

Randolph County

R-25. J. S. White.  $1\frac{1}{2}$  miles south of Trinity. Dug well; depth 36 feet; diameter 36 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	28.06	27.56
1935	26.90	26.39	24.71	23.81	24.50	24.32	26.22	27.02	27.61	28.20	28.44	28.66
1936	26.81	25.44	25.06	23.21	24.70	25.75	26.81	27.08	27.64	27.16	27.56	26.86
1937	23.85	23.49	23.73	23.79	24.19	25.25	26.32	26.87	27.52	27.78	28.00	28.06
1938	27.37	27.57	27.43	27.52	27.97	27.99	-----	27.30	28.00	28.53	28.26	28.20
1939	-----	-----	24.17	24.36	25.68	26.67	27.08	27.02	27.48	27.97	28.36	28.65
1940	28.18	27.13	26.21	25.90	25.54	26.30	26.87	26.57	27.19	27.92	27.79	28.03
1941	27.30	28.26	27.10	26.85	27.29	27.80	27.36	27.95	28.52	29.02	29.50	29.82
1942	30.30	30.10	28.88	28.65	28.65	28.41	28.76	28.68	28.60	28.92	29.05	28.56
1943	28.62	27.53	27.32	26.38	27.00	27.38	27.23	27.30	28.45	29.03	29.48	29.96
1944	28.47	27.63	24.30	24.64	25.35	26.30	25.58	26.45	26.32	27.30	27.20	28.12
1945	28.02	27.05	27.26	26.55	26.70	26.93	28.00	28.27	28.23	28.16	28.90	28.50

# Randolph County

R-27. Walter Lambeth. Four miles southwest of Trinity. Dug well; depth 27 feet; diameter 18 inches.

Water level, in feet below land-surface datum, near end of month

Year	January	February	March	April	May	June	July	August	September	October	November	December
1934	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	26.42	24.36
1935	23.44	20.73	20.74	22.22	23.46	24.09	23.56	25.36	25.12	26.37	23.41	26.38
1936	20.74	18.45	20.18	19.97	22.60	20.85	21.83	22.62	23.07	20.80	24.04	18.65
1937	16.47	20.59	21.49	19.91	22.00	22.91	23.80	24.52	24.96	25.21	25.65	18.30
1938	16.17	23.18	20.71	23.01	24.11	25.18	-----	25.08	26.17	26.29	14.12	18.31
1939	17.84	17.45	19.65	22.88	23.90	24.63	25.11	21.43	24.42	25.68	dry	dry
1940	19.95	12.09	15.29	22.44	22.18	24.37	25.08	19.95	23.94	25.49	24.39	19.22
1941	19.90	22.42	22.40	21.99	22.14	23.06	20.74	21.82	25.60	dry	dry	dry
1942	dry	dry	20.40	22.60	22.50	21.50	23.46	21.71	20.32	dry	dry	24.60
1943	21.90	20.30	18.39	14.98	15.09	15.02	21.50	21.70	23.66	23.80	dry	dry
1944	16.80	14.50	11.52	11.70	15.38	20.55	16.98	19.43	20.00	21.18	21.30	19.17
1945	17.70	13.00	13.81	12.38	13.50	16.39	13.74	14.88	10.80	13.32	18.85	18.10

## Geology and ground-water resources of the Piedmont area

The Piedmont area of Cape Fear River basin includes parts of Forsyth, Rockingham, Guilford, Randolph, Caswell, Alamance, Orange, Durham, Wake, Chatham, Moore, Lee, and Harnett Counties. The rocks of this area include granites, gneisses, schists, and slates of Paleozoic age, or older, and consolidated sedimentary rocks of Triassic age. These rocks crop out in northeastward-trending belts extending nearly at right angles across the basin. The areal geology of the Piedmont section of the basin, shown in figure 2, is based chiefly on field observations of J. L. Stuckey, State Geologist, and the writer. The geology of this area has not been mapped in detail and the geology as shown is somewhat generalized. The age of most of the formations is uncertain. Most of the gneisses, slates, and schists are believed to be of pre-Cambrian age, although they may be younger. The granite generally is considered to be of Carboniferous age, although at places some granite bodies appear to be older than the slate and schist. The belt of consolidated sedimentary rocks extending through Durham, Wake, Chatham, Lee, and Moore Counties has been assigned, on paleontological evidence, to the Newark group of Triassic age.

In the crystalline and consolidated sedimentary rocks of the Piedmont section, ground water occurs in and moves along joints and other fractures, cleavage and bedding planes, and planes of schistosity. Because drilled wells obtain their water from these openings, the wells that encounter the most and largest openings usually yield the largest supplies of water. The productiveness of the rocks ranges widely not only from one type of rock to another, but also from place to place within each rock type. Data obtained to date indicate that the schists included in the slate belt are the best aquifers, the gneisses probably are second, and the granites third. The Triassic rocks are probably among the poorest of the major aquifers in the Piedmont.



One of the most important problems in the Piedmont is to select the best possible location for drilling a well to obtain the maximum quantity of water. Factors to be considered in selecting a well site include texture of the rock, amount and kind of jointing, fracturing, shearing, bedding planes, cleavage and schistosity, veins, dikes, topographic location, and thickness of weathered mantle.

The coarser-textured rocks generally are more productive than the finer-textured ones, probably because fracturing or shearing of the coarse-grained rocks produces larger openings than it does in fine-grained ones. Wells drilled where joints, fractures, and shearing planes are closely spaced usually are more productive than wells drilled where these openings are more widely spaced. In rocks of sedimentary origin, important openings may occur along bedding planes and in metamorphic rocks, whether of sedimentary or igneous origin, planes of cleavage and schistosity are important in the occurrence and movement of ground water. Places where these planes are prominent and closely spaced generally are more productive than places where they are widely spaced.

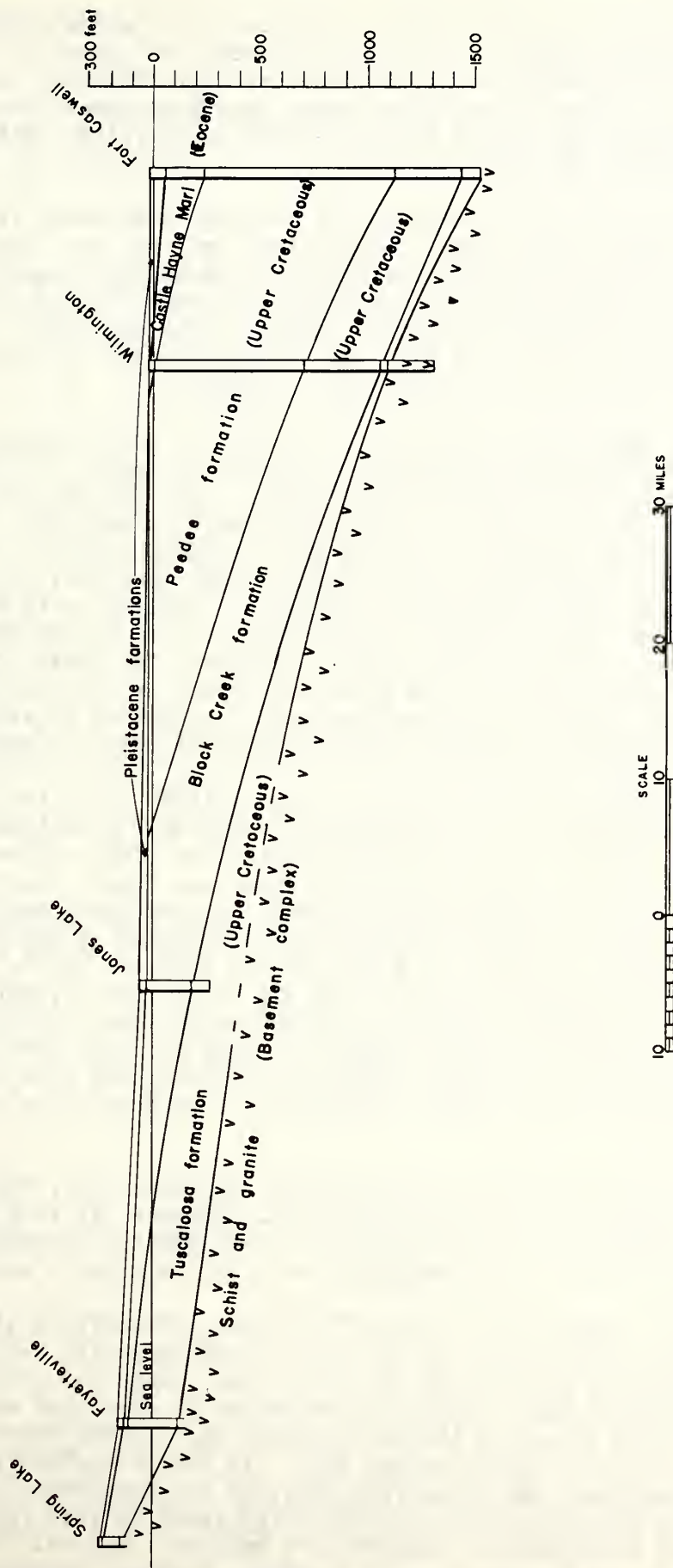
Quartz veins are very important avenues in the storage and movement of ground water. Quartz is a hard, brittle mineral which fractures easily and breaks into relatively large, irregular fragments when subjected to earth stresses. Ground water can usually move much more readily through quartz veins than in the adjacent rock. Wells intersecting one or more quartz veins generally are much more productive than wells which do not.

Dikes are walls of lava which were injected into crevices in the adjacent rock when the lava was molten. Generally the adjacent rock has been considerably fractured and broken by the injection and in most places wells drilled near dikes yield considerably more water than wells drilled into the undisturbed rock some distance from the dikes. However, most dikes, themselves, do not yield much water.

The rocks of the Piedmont area at most places are very deeply weathered; and at many places the thick layer of weathered material forms such an extensive cover over the underlying rock that little direct evidence is available regarding fracturing, cleavage, and the presence of veins and dikes. However, the topography frequently gives indirect evidence regarding these factors. In an area being actively worn down by erosion, as is the Piedmont of North Carolina, hills are left because they are relatively resistant to erosion. Valleys, "draws", (small valleys or gullies), and similar depressions are formed where the rocks are less resistant. At many places this lower resistance is due to the greater fracturing of the rock, which permits circulation of ground water and promotes chemical decay of the rocks, making them easy to erode. Obviously such places are more favorable for drilling wells than the hills, which are underlain by less fractured rock. In the Greensboro area it was found that the average yield of wells drilled in topographic depressions was more than three times as large as the yield of wells drilled on hills. Another reason that a depression is a more favorable location for a well is that the natural movement of the ground water is into the depressions and away from the hills.

The thickness of the saprolite (weathered rock) is important. In the Greensboro area the average yield of wells in which the weathered mantle was 30 feet or less in thickness was about 8 gallons a minute. The average yield of wells in which the thickness of mantle ranged from 31 to 65 feet was about 17 gallons a minute, and the average yield of wells in which the thickness of mantle was 66 feet or more was about 25 gallons a minute. The thick layer of saprolite stores large quantities of water which moves into the fractures of the underlying rock when the well is pumped.

Water from wells in the Piedmont generally is soft or only slightly hard. Many wells yield water with little or no iron but a considerable number yield water with objectionable amounts of iron. The temperature of the water ranges from about 60° to 64°F.



Cross section of the Coastal Plain showing the geologic formations



Gneiss (pre-Cambrian (?)).- The gneiss crops out in a narrow belt extending southwestward from Fuquay Springs in Wake County across the corner of Harnett and Chatham Counties into Lee County and in an irregular belt extending from Forsyth County across the northwestern corner of Guilford County into Rockingham County. It occupies a small area in this basin and only a few wells have been drilled into it. It is chiefly a quartz feldspar mica gneiss.

The average yield of 16 wells in gneiss in the Cape Fear Basin is 50 gallons a minute. This high average yield is due largely to a well recently completed at Fuquay Springs, which yields 330 gallons a minute. The average, omitting this well, is 31 gallons a minute. In the Neuse River Basin the average yield of wells in gneiss was found to be  $26\frac{1}{2}$  gallons a minute. Careful consideration of all the factors mentioned above in the selection of a well site may be expected to result in a somewhat larger average yield for wells drilled in the gneiss.

Slate and schist (pre-Cambrian (?)).- This rock unit underlies approximately two-thirds of the Piedmont section of the Cape Fear River Basin. The rocks crop out chiefly in two belts separated by the Triassic basin. The eastern belt extends from Moore County northeastward through Lee and Harnett Counties into Wake and Johnson Counties. The northwestern belt crops out in the northwest corner of Moore County and extends across Randolph, Chatham, Orange, and Durham Counties. It also occupies considerable areas in Alamance and Guilford Counties. Included with this unit are a number of rock types, two of which were mapped separately in the Greensboro area. These are the greenstone schist and the sericite schist. The rocks of the unit are chiefly of volcanic origin, some as lava flows and others as pyroclastics. Some of the schists, particularly those in the eastern belt, originated as water-laid sediments in which considerable sand and clay was intermingled with volcanic ash.

In Randolph and Chatham Counties the rocks are chiefly slaty tuffs and tuffaceous schist, at most places light-colored fine-grained rocks with a well-developed cleavage and schistosity. At some places the rock consists of light-colored coarse-grained breccias and at other places light-colored lava flows are found. Farther to the northwest, in the vicinity of Liberty and Randleman in Randolph County and extending in irregular patches from Burlington to Greensboro, are areas of greenstone schist. This rock includes several varieties of schistose and gneissic rock all of which are green in color and are of igneous origin. They are mostly mafic (containing a large proportion of magnesium- and iron-bearing minerals) extrusives, including lava flows, tuffs, and breccias, and they have been greatly sheared and have developed prominent schistosity. A belt of sericite schist extending northeastward from Guilford College is included in this unit. It is a very fine-grained rock consisting chiefly of sericite, chlorite, and quartz.

Weathering of the rocks in this unit generally is quite deep, the thickness of weathered mantle rock ranging up to a hundred feet. However, at some places, particularly in the central part of the basin in Randolph and Chatham Counties, weathering is much shallower. The color of the weathered material is usually some shade of red.

The schist of the eastern belt is one of the most productive aquifers in the Piedmont. The average yield of seven wells in the eastern schist belt tabulated in this report is 49 gallons a minute. In the Neuse River Basin the average yield of 23 industrial and municipal wells listed in the report on that area was  $69\frac{1}{2}$  gallons a minute. The greenstone schist in the northwestern part of the basin apparently is as good an aquifer as the eastern schist belt. In the Greensboro area the average yield of 56 municipal and industrial wells in the greenstone schist was 55 gallons a minute. The average yield of 58 wells tabulated in this report which end or are believed to end in greenstone schist is 56 gallons a minute. However, the large central mass of slate cropping out in Randolph, Chatham, southeastern Alamance,



Orange, and Durham Counties is a relatively poor aquifer. Generally the rock is more massive in structure and the cleavage and schistosity are much less well developed than elsewhere. The average yield of 24 wells in this area is 17 gallons a minute.

Quartz veins are very important in the drilling of successful wells in the slates and schists. It is probable that most successful wells in this unit owe their success to the intersection of quartz veins. Topographic location and thickness of weathered mantle are also important factors in selection of a well site in these rocks.

Granite (Carboniferous (?)).-- The granite crops out in irregular patches chiefly in northern Randolph County and in Guilford, Alamance, and Caswell Counties. Another area of granite, separated from the main area by the slate belt, occurs in the vicinity of Chapel Hill in Orange County and extends southward to Bynum in Chatham County. The granite at most places is a coarse-grained pinkish-gray gneissic biotite granite. It has undergone considerable metamorphism and is greatly sheared at most places. Ground water occurs in the granite chiefly in joints and fractures and along shear zones. Horizontal joints are very important and, because these decrease in number with depth, less and less ground water is obtained with increasing depth. At places where the granite has been considerably sheared and fractured, wells will yield moderate supplies of ground water, but in areas of massive granite little or no water can be obtained. In the Greensboro area 163 wells have an average yield of 12 gallons a minute. These include domestic, industrial, municipal, and public-supply wells. The 26 industrial and municipal wells in the group have an average yield of about 33 gallons a minute. The average yield of 29 wells drilled in granite in the Cape Fear River Basin is 24 gallons a minute. The average yield of wells can be increased considerably by a careful selection of drilling locations, basing the choice on geologic and topographic evidence. The number and size of joints and fractures in granite decrease rapidly with increasing depth, and most wells obtain a large proportion of their water at relatively shallow depth. Drilling beyond 250 or 300 feet is rarely advisable and wells with small yields at 150 to 200 feet have little chance of getting more water at greater depth.

Newark Group (Triassic).-- The Triassic rocks assigned to the Newark group crop out in a belt extending southwestward from Durham and Wake Counties across the southeastern corner of Chatham County and the northwestern half of Lee County through Moore County. The rocks consist chiefly of red, yellow, or brown arkosic and argillaceous sandstones, shales, mudstones, and conglomerates. These rocks were deposited as sediments in a subsiding inland basin or trough and are very lenticular. They have been consolidated by compaction and cementation so that the pores are largely filled and circulation of ground water between the grains is very limited. Most of the ground water moves along fractures and bedding planes. At many places these rocks are among the poorest aquifers in the Piedmont, but at a few places in the Cape Fear Basin moderate supplies can be obtained. The coarser-grained strata usually yield larger supplies than the finer-grained ones, probably because fracturing tends to create larger openings. Where the strata are greatly fractured, good yields are usually obtained. The many diabase dikes which have been injected into the Triassic rocks have broken the adjacent strata, and wells drilled near these dikes generally yield much more water than wells drilled farther away. Wells drilled in the conglomerate along the eastern margin of the belt also usually have better-than-average yields. The yields of many wells decline greatly after pumping for long periods. The reason may be that the water stored in the small pores in the rock near the well can move readily into crevices and thence into the well under the high gradients existing there, but it is replaced only slowly by lateral flow through the pores from greater distances. Thus, after this storage is exhausted, most of the water flowing into the well must travel through joints and fractures. The average yield of five wells in Triassic strata tabulated in this report is 10 gallons a minute.



## Public ground-water supplies in the Piedmont area

There are nine municipal ground-water supplies in the Piedmont area of the Cape Fear River Basin, serving a population of 12,980 (1940 census).

Angier, in Harnett County, obtains its water from two wells in slate. Both wells are 8 inches in diameter; one of them, 292 feet deep, yields 80 gallons a minute; the other, 250 feet deep, yields 60 gallons a minute. The 292-foot well, at the north end of town, is used regularly and the water is aerated for removal of iron. The other well is used as an auxiliary source.

Carthage, in Moore County, obtains its water from seepage springs in a small basin about 1 mile southeast of town. The springs have been developed by laying many hundred feet of terra cotta pipe to collect the water from the many seepages. Consumption of water averages about 100,000 gallons a day, and the yield is insufficient to supply the needs during periods of fair weather when the yield of the springs decreases. The water is treated by the addition of Sodium hydroxide and by chlorination.

Elon College, in Alamance County, obtains its water from two drilled wells in greenstone schist. One well, drilled on a hill, is 900 feet deep and yields 33 gallons a minute. The other well, drilled in a shallow draw, is 300 feet deep and yields 150 gallons a minute. Both wells are 8 inches in diameter. The water is not treated.

Fuquay Springs, in Wake County, obtains its water from four wells ranging in depth from 250 to 400 feet and in yield from 60 to 330 gallons a minute. These wells are drilled in gneiss. The water is treated in a modern treatment plant for the removal of iron and partial softening.

Gibsonville, in Guilford County, obtains its water from two drilled wells, one in Guilford County and the other in Alamance County. The well in Guilford County is 201 feet deep and yields 100 gallons a minute. The well in Alamance County is 335½ feet deep and was tested at 112 gallons a minute. The water is not treated.

Graham, in Alamance County, obtains its water from six drilled wells ending in greenstone schist which is included with the slate and schist unit. The wells are all 8 inches in diameter. Five of the six range in depth from 354 to 501 feet and have yields ranging from 30 to 45 gallons a minute. The sixth well, 1,005 feet deep, yields about 40 gallons a minute. The water is not treated.

Liberty, in Randolph County, obtains its water from three wells drilled in the slate and schist unit. The rock probably is a greenstone schist. The wells range in depth from 175 to 360 feet and in yield from 60 to 100 gallons a minute. The water is not treated.

Lillington, in Harnett County, obtains its water from four wells ranging in depth from 291 to 460 feet and in yield from 24 to 90 gallons a minute. Three of the wells yield water with a moderately low iron content, but the water of the other contains a considerable amount of iron.

Pittsboro, in Chatham County, obtains most of its water supply from seepage springs in a shallow basin south of the town, near Robeson Creek. The water issues from the residual weathered material above slate and is collected in a concrete sump and in an infiltration trench below a low dam across the basin. The flow from the springs varies from about 15 to 40 gallons a minute. The spring supply is supplemented by water from Robeson Creek or by water from a well. The well is 100 feet deep and yields 24 gallons a minute. The water from the springs is chlorinated,

and that from the creek is filtered and chlorinated. The well water is not treated.

## Geology and ground-water resources of the Coastal Plain

Counties partly or entirely within the Coastal Plain section in the Cape Fear River Basin include Harnett, Cumberland, Hoke, Bladen, Sampson, Duplin, Onslow, Pender, New Hanover, and Brunswick.

The rock formations of the Coastal Plain are very different from the hard rocks found in the Piedmont section of the Cape Fear Basin. They comprise a southeastward-thickening wedge overlying hard rocks which are an extension of those in the Piedmont. In contrast with the consolidated sediments and crystalline rocks of the Piedmont, the formations in the Coastal Plain consist of beds of unconsolidated and semiconsolidated sand, clay, marl, shale, and some limestones and occasional sandstone layers. These formations crop out as belts trending northeastward, approximately parallel to the coast line and dipping at a very low angle to the southeast. The dip is slightly greater than the slope of the land surface, so that younger formations crop out successively to the southeast. At the Fall Zone, which marks the boundary between the Piedmont and the Coastal Plain, the irregular surface formed on the crystalline rocks and the Triassic sandstone and shale dips coastward beneath the sedimentary strata of the Coastal Plain. The slope of this basement-rock surface is only about 8 to 10 feet per mile in the inner half of the Coastal Plain but it increases to 15 or 20 feet per mile near the coast, so that, in general, each stratum of the Coastal Plain sediments becomes progressively thicker toward the coast.

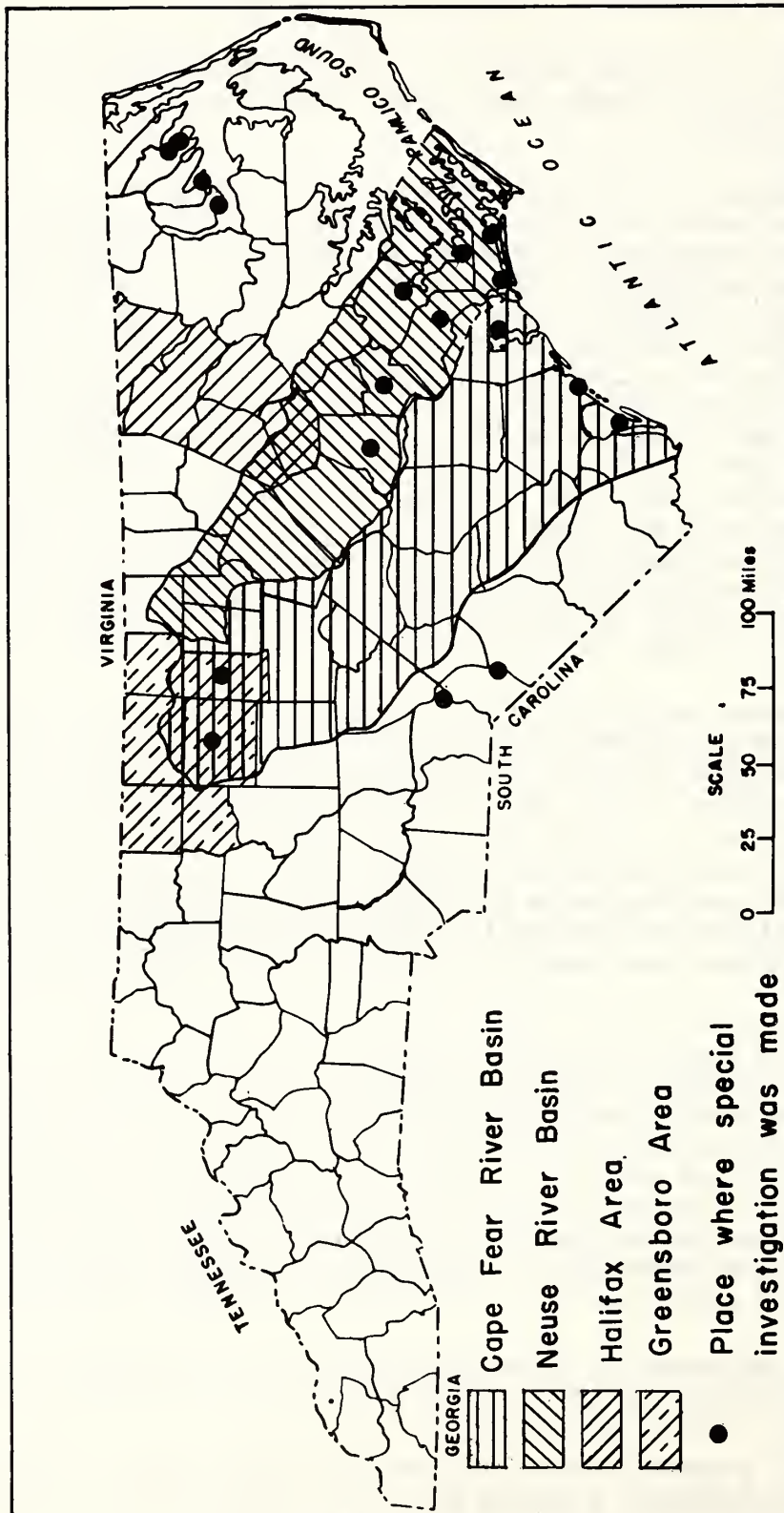
Figure 3 is a cross section showing the formations of the Coastal Plain approximately along the Cape Fear River. The dips of the formations along this cross section are considerably less than the dips of the same formations as shown in figure 3 of the Neuse River Basin report.<sup>1/</sup> The dip of the Coastal Plain formations in South Carolina, as shown in figures 2 and 3 of a recent report on ground-water in South Carolina,<sup>2/</sup> is also considerably more than on the Cape Fear River. It is evident that the section along the Cape Fear River is along a structural ridge. Not only do the formations along this section dip to the southeast, they also have a component of dip to the southwest and to the northeast; that is, the strata form an arch plunging to the southeast.

In most parts of the Coastal Plain except the area immediately southeast of the Fall Zone, where the strata are thin, the sediments will yield large quantities of water to wells. The total potential ground-water supply in the Coastal Plain section of the Cape Fear Basin is several hundred million gallons a day, and individual supplies of several million gallons daily can be obtained at many places. Wells capable of yielding 1,000 gallons a minute or more have been drilled at a number of places. The water from the northwestern two-thirds of the Coastal Plain area is soft and low in dissolved solids, but at some places it contains considerable quantities of iron. Near the coast most ground waters are hard. Salt water is found at depths ranging from

<sup>1/</sup> Riley, W. H. and Mundorff, M. J., Hydrologic data on the Neuse River Basin, 1866-1945, North Carolina Dept. Cons. and Dev., p. 98, 1947.

<sup>2/</sup> Siple, George E., Progress report on ground-water investigations in South Carolina. South Carolina State Resources Planning and Devel. Board, Bull. 15, 1946.





Map of North Carolina showing where ground-water investigations have been made.

about 140 to 300 feet immediately adjacent to the larger estuaries, such as New River as far inland as Jacksonville and the Cape Fear and northeast Cape Fear as far inland as Lock 1 and Burgaw. In the interstream areas between these estuaries, however, the depth to salt water is much more, generally being more than 500 feet. Ground-water temperatures range from about 62° to 65° F.

### Upper Cretaceous series

Tuscaloosa formation.— This is the basal sedimentary formation of the Coastal Plain in this area and lies directly upon the irregular surface of the basement rock. The strata consist of red, yellow, brown, purple, gray, and white sands, clays, and some gravel. The sands and gravels are somewhat clayey at many places. The clay often contains considerable sand and is usually micaceous. The strata are generally lenticular, so that individual layers cannot be traced for any considerable distance. The Tuscaloosa formation dips southeastward 8 or 10 feet per mile in its area of outcrop, but the dip increases gradually to the southeast and is about 20 feet per mile near the coast. The formation thickens from a feather edge along the Fall Zone to about 300 feet where it passes beneath the Black Creek formation. Farther down dip it apparently becomes thinner and it evidently is only about 30 feet thick at Wilmington and 85 feet thick at Fort Caswell. Some of the sand strata in the Tuscaloosa contain too much clay to be very permeable, but clean, permeable sands occur at different depths wherever the formation is present. The Tuscaloosa is one of the best aquifers in the Coastal Plain and will yield several hundred gallons a minute to wells at almost any place except along the northwestern margin where it is thin. Wells yielding from 500 to 1,000 gallons a minute have been drilled at a number of places, although none yielding that much have been drilled so far in the Cape Fear Basin. Two towns in this basin obtain their water supply from the Tuscaloosa formation. The average yield of the nine wells yielding water from the Tuscaloosa formation is 90 gallons a minute. The potential supply from the Tuscaloosa formation is many times the amount now being utilized.

Water from this formation generally is soft and low in dissolved solids. At some places, however, the water contains objectionable amounts of iron. Analysis No. 1 for Hoke County is representative of water from the Tuscaloosa formation.

Black Creek formation.— The Black Creek formation crops out in a belt southeast of that of the Tuscaloosa formation. Farther to the southeast the Black Creek in turn is overlain by the Peedee formation. The lower part of the Black Creek formation consists typically of black laminated clays and interbedded fine-grained gray sands. Lignitized wood is a common characteristic of these strata. At some places red and yellow sands and clays resembling those of the Tuscaloosa formation are found in the Black Creek. In the upper part of the Black Creek formation the strata consist of sands and clays interbedded with marls and thin layers of calcareous sandstones and shell rock. The dip of the Black Creek formation ranges from about 5 to 20 feet per mile. The maximum thickness probably is about 350 feet.

The Black Creek formation is an excellent aquifer at most places and wells yielding several hundred gallons a minute can be obtained at many places. The 13 wells tabulated in this report yield an average of 225 gallons a minute. The potential supply from this formation is many million gallons a day, of which only a small part is being utilized. The area in which wells can obtain water from the Black Creek formation extends from its western limit of outcrop eastward within 10 or 15 miles of the coast. Beyond that point the water probably would be too brackish for use. Water from the lower part of the formation is soft and low in dissolved solids but that from the upper part is considerably harder. At some places the water contains considerable amounts of iron.



Analyses 1, 2, 3, 4, 7 and 8 for Duplin County and No. 2 for Sampson County are of water from the Black Creek formation.

Peedee formation.- The Peedee formation overlies the Black Creek formation and crops out in a belt to the southeast. It consists of marine sands, clays, marls, and limestones. Some of the strata contain shells and many of them are glauconitic. The dip of the formation ranges from 5 to 15 feet per mile and the maximum thickness probably is about 900 feet. The Peedee formation is an excellent aquifer at most places. Wells capable of yielding several hundred to more than a thousand gallons a minute have been drilled at a number of places. The average yield of 32 wells tabulated in this report is 199 gallons a minute. The area in which water supplies can be obtained from the Peedee formation extends from its northwestern limit of outcrop to the coast, although immediately adjacent to New River and Cape Fear River the water may be too brackish for use. The water from the Peedee formation generally is hard.

Analyses 1, 3, and 4 for Pender County; No. 6 for Bladen, New Hanover County No. 9, and Onslow County Nos. 16 and 22 are of water from this formation.

#### Eocene series

Beds of Black Mingo age.- Isolated outcrop of strata of lower Eocene age have been found at a number of places in Wake and Harnett Counties. These strata usually consist of siliceous limestone or calcareous sandstone and apparently are approximately equivalent to the Black Mingo formation of South Carolina. In the same areas in which occur these isolated patches of fossiliferous Eocene strata are extensive deposits of sand and gravel of unknown age. These sands and gravels crop out over much of the southern part of Wake County, most of Harnett and Lee Counties, and a considerable part of Moore County. They also occur in the southeastern corner of Chatham County. It is not known whether these sands and gravels are of Eocene age; however, they appear to be much older than the Pleistocene terrace deposits and occur at a much higher elevation than these terraces. It is possibly significant that the fossiliferous lower Eocene strata had been noted in the same areas where the high-level sands and gravels are found, and they may be related. It is interesting to note that sandy shales of probable lower Eocene age near Thelma, in Halifax County, are overlain by similar sands and gravels. Because of the uncertainty regarding the age of these deposits and because they have never been mapped in detail, they are not shown on the geologic map.

Water is obtained from some drilled wells in these sand and gravel deposits and many domestic dug and bored wells obtain from them. The town of Carthage obtains its water supply from springs discharging from the gravels just above a clay layer. At many places the sand and gravel contains considerable clay so that the strata are not very permeable. However, at other places the sand and gravel are quite permeable and considerable quantities of water might be available from them.

Castle Hayne marl.- The Castle Hayne marl, of upper Eocene age, overlies the Peedee formation and crops out in eastern Duplin County and western and northwestern Onslow County and extends across Pender and New Hanover Counties into Brunswick County. The dip of the formation in its area of outcrop is very low, probably only a few feet per mile to the southeast, and the Castle Hayne is probably not more than a hundred feet thick in that area. Farther to the southeast where it dips beneath the Trent marl the dip and thickness increase. The maximum thickness is probably several hundred feet.

The Castle Hayne marl consists of sand, sandy marl, sandy limestone, and some nearly pure limestone. It yields large quantities of water at a number of places. The best aquifers are porous limestone and shell-rock strata. Large quantities of

water are obtained from this formation from Pollocksville in Jones County southwestward through Jacksonville and Holly Ridge to Wilmington and Southport. Many wells drilled in this formation have yielded 300 or 400 gallons a minute with very small drawdowns. The average yield of 38 wells tabulated in this report is 209 gallons a minute.

New Hanover County analyses 16, 17, 18, 30, 35, and 42; Onslow County Nos. 3, 6, 8, 17, and 18; and Brunswick County No. 2 are of water from the Castle Hayne marl.

#### Miocene series

Trent marl.— The Trent marl crops out in a belt southeast of that of the Castle Hayne marl and extends from a point near Holly Ridge through Jacksonville to New Bern. It consists of sand, sandy marl, sandy limestone and coquina. It ranges in thickness from a few tens to a few hundreds of feet and dips 10 or 15 feet per mile to the southeast. Many of the limestone and shell-rock strata are very permeable and yield large quantities of water to wells. Large yields have been obtained in a number of wells in Onslow County. Yields of several hundred gallons a minute with small drawdowns have been obtained in a number of wells at Camp Lejeune. Water from the Trent marl is hard and at many places contains considerable iron.

Duplin marl.— The Duplin marl crops out in patches lying upon the beveled surface of the older Coastal Plain formation in Duplin, Sampson, and Bladen Counties. It is also penetrated by wells on the coast of Onslow County and northeastward where it consist of sand, sandy marl, and limestone. The Duplin is not important as an aquifer in the areas where it crops out in Duplin, Sampson, and Bladen Counties, but it is a good aquifer along the coast in Onslow County. Some of the wells supplying outlying parts of Camp Lejeune obtain their water from the Duplin marl and most of the wells around Swansboro obtain water from it. Yields of several hundred gallons a minute, with small drawdowns, can be obtained at most places in that area. The water at most places is hard.

Onslow County analysis 2 is of water from the Duplin marl.

Pleistocene deposits.— The area shown on figure 2 as Pleistocene includes only that part of the basin where the Pleistocene is comparatively thick and completely covers all underlying formations. It is only a part of the area actually occupied by Pleistocene deposits, because much of the rest of the Coastal Plain province is covered by a thin veneer of Pleistocene sediments 10 to 25 feet thick, lying unconformably upon all the older formations. The surface of these Pleistocene deposits forms the Coastal Plain terraces. The deposits consist of sandy clay, clayey sand, and some clean sand and gravel. Many domestic water supplies and a number of industrial supplies are obtained from the Pleistocene deposits. The yield of an individual well is usually small but batteries of small-diameter wells furnish moderate supplies. Supplies up to a million gallons a day can be obtained at some places in the Cape Fear River Basin and smaller supplies can be obtained at many other places. Water from these deposits is generally soft, but at many places it contains a considerable amount of iron.

#### Public ground-water supplies in the Coastal Plain area

There are 21 municipal ground-water supplies in the Coastal Plain area of Cape Fear River Basin.

Burgaw, in Pender County, obtains its water from a gravel-walled well 220 feet deep in sands of the Peedee formation. The hole is 24 inches in diameter, with gravel placed around an 8-inch slotted pipe in the center. The well was tested at 150 gallons



a minute with a drawdown of 5 feet. The water has a hardness of 142 parts per million. Treatment consists of aeration over coke and filtration. About 35,000 gallons of water is used daily.

Carolina Beach, in New Hanover County, obtains its water from three wells 195 to 200 feet deep and yielding 150 to 300 gallons a minute each. The water comes from shell rock in the Castle Hayne marl. The maximum consumption, during the summer months, is about 400,000 gallons a day. The water is not treated.

Clinton, in Sampson County, obtains its water from two gravel-walled wells, 260 and 267 feet deep, yielding 350 and 600 gallons a minute, respectively, from sands of the Black Creek formation. The hardness of the water is about 50 parts per million. The water is not treated. About 350,000 gallons of water is used daily.

Coats, in Harnett County, is supplied with water from a spring supply owned by Fred Byrd. The spring consists of four or five seepage areas issuing from sand at the foot of a hill about a quarter of a mile southwest of town. The water is collected by infiltration into a soil pipe along the base of the hill. The average yield is about 20,000 gallons a day, but it decreases considerably during prolonged dry weather. The water is chlorinated. About 10,000 gallons is used each day.

Elizabethtown, in Bladen County, obtains its water from a gravel-walled well 199 feet deep ending in the sands of the Black Creek formation. The well was tested at 150 gallons a minute with a drawdown of 18 feet.

Faison, in Duplin County, obtains its water from two drilled wells about 200 feet deep, ending in sand of the Black Creek formation. One well yields 90 and the other 100 gallons a minute. The water has a hardness of 20 to 50 parts per million and is not treated. About 50,000 to 60,000 gallons of water is used each day.

Holly Ridge, in Onslow County, obtains its water from a drilled well 180 feet deep ending in shell rock of the Castle Hayne marl. The well is 8 inches in diameter and was tested at a rate of 330 gallons a minute. The water has a hardness of about 200 parts per million.

Jacksonville, in Onslow County, obtains its water from three wells ranging in depth from 185 to 200 feet. These wells end in shell rock of the Castle Hayne marl and the yields range up to 300 gallons a minute. Consumption ranges from about 200,000 to 250,000 gallons a day. The water has a hardness of about 200 to 225 parts per million. It is not treated.

Kenansville, Duplin County, obtains its water from a drilled well, 198 feet deep, in sand of the Black Creek formation. The well yields 200 gallons a minute. The water has a hardness of 111 parts per million and is not treated.

Raeford, in Hoke County, obtains water from two wells each 12 inches in diameter and 75 feet deep, each well yielding 100 gallons a minute. The wells are screened in sands of the Tuscaloosa formation. Treatment consist of aeration and addition of lime. The water has a hardness of 10 parts per million. About 100,000 gallons is used daily.

Richlands, in Onslow County, obtains its water from a drilled well 550 feet deep ending in sand of the Peedee formation. The well yields 100 gallons a minute. The water has a hardness of 36 parts per million and is not treated. Consumption averages about 25,000 gallons a day.

Roseboro, in Sampson County, obtains its water from fourteen  $1\frac{1}{4}$  - inch driven wells, each equipped with a 5-foot strainer and point. The wells are from 45 to 48 feet deep and are pumped by two suction pumps with a combined yield of 120 gallons a minute. The water-bearing formation is coarse sand in the Black Creek formation.

The water is soft but contains much iron. It is not treated. About 80,000 gallons a day is used.

Rose Hill, in Duplin County, obtains water from a drilled well, 186 feet deep, in sand of the Black Creek formation. The well yields 150 gallons a minute. The water has a hardness of 136 parts per million and is not treated. About 40,000 gallons is used each day.

Southport, in Brunswick County, obtains water from two wells 110 and 120 feet deep yielding 50 and 150 gallons a minute, respectively. The wells are screened in sand of the Castle Hayne marl. The water has a hardness of about 180 parts per million and is not treated. About 200,000 gallons is used daily.

Spring Lake, in Cumberland County, obtains water from three wells each 75 feet deep, with yields of about 40 gallons a minute each. The wells are screened in sands of the Tuscaloosa formation. The water is not treated. About 100,000 gallons of water is used each day.

Sunset Park, in New Hanover County, obtains its water from eight wells ranging in depth from 91 to 143 feet and in yield from 60 to 150 gallons a minute. Not all the wells are being used at the present time. The water is obtained from shell rock of the Peedee formation and has a total hardness of 96 parts per million. Consumption ranges from 150,000 to 300,000 gallons a day. The water is not treated.

Swansboro, in Onslow County, obtains water from a drilled well 189 feet deep which yields 250 gallons a minute. The well is cased to  $90\frac{1}{2}$  feet and the hole is open below that depth, the water being obtained from shell rock in the Duplin marl. Consumption is estimated to average 20,000 to 25,000 gallons a day. The water is not treated.

Vass, in Moore County, obtains its water from a well 250 feet deep ending in the slate and schist unit. The well yields about 30 gallons a minute.

Wallace, in Duplin County, obtains water from a drilled well 150 feet deep, and 10 inches in diameter. The well is screened in sand of the Black Creek formation and yields about 100 gallons a minute.

Warsaw, in Duplin County, obtains water from three wells ranging in depth from 77 to 120 feet. The wells are 8 inches in diameter and are screened in sand of the Black Creek formation. Yields range from 40 to 80 gallons a minute. The water has a hardness of about 94 parts per million and is not treated. About 75,000 gallons is used daily.

Wrightsville Beach, in New Hanover County, obtains water from three wells ranging in depth from 160 to 176 feet and in yield from 150 to 300 gallons a minute. The casing in each well is set in shell rock of the Castle Hayne marl at depths of 125 to 146 feet, and the remainder of the hole is open. The water has a hardness of about 185 parts per million and a chloride content of 92 to 186 parts per million.

Bluethenthal Field, the Army Air Base near Wrightsboro, New Hanover County, obtains water from three drilled wells 96 to 105 feet deep yielding water from shell rock in the Peedee formation. The tested yields ranged from 211 to 343 gallons a minute with drawdowns ranging from 6 to 25 feet.

Camp Davis, Onslow County, obtains its water from fourteen wells 8 inches in diameter, ranging in depth from 175 to 183 feet and tested at yields of 220 gallons a minute each with drawdowns ranging from 2 to 20 feet. Treatment consists of aeration over coke.



Camp Lejeune, Onslow County, obtains its water supply in the main barracks area from 21 drilled wells averaging 167 feet deep and yielding an average of 220 gallons a minute. Most of these wells are gravel walled. Many other wells ranging from about 60 to 452 feet in depth have been drilled at various other places on the reservation.

Fort Caswell, Brunswick County, obtains water from four wells about 125 feet deep at the corners of an area about 300 feet square. The four wells are pumped by a suction pump at a centrally located pump house and together yield about 200 gallons a minute.

Fort Fisher, New Hanover County, obtains water from five drilled wells ranging in depth from 135 to 207 feet, with an average yield of about 250 gallons a minute. The wells end in shell rock of the Castle Hayne marl.

# Analyses of water from wells in the Piedmont section of the Cape Fear River Basin

Analyzed by the U. S. Geological Survey  
(Well numbers correspond to the numbers in the tables of well data)

(Parts per million)

Location	Well no.	Depth (feet)	Aquifer	Date	Silica (SiO <sub>2</sub> )	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Dissolved solids	Total hardness as CaCO <sub>3</sub>
<b>Alamance County:</b>																
Burlington	14	634	Granite (?)	June 2, 1942	---	0.01	37	12	10	146	14	16	---	9.1	---	142
Burlington (Hopedale)	10	470	do.	July 7, 1942	26	.02	37	11	25	178	19	16	.0	3.5	217	138
Elon College	18	300	Greenstone schist	Aug. 6, 1942	47	.01	13	7.2	7.3	88	1	2.8	.0	1.0	122	62
Gibsonville	22	335	do.	July 10, 1942	40	.01	16	6.2	14	110	2	2.5	.0	.0	129	65
Graham		1005		May 22, 1942	31	.03	38	13	13	159	11	22	.2	4.5	221	148
Saxapahaw	26	168	Slate	June 25, 1942	---	.01	6.9	3.6	8	50	1.0	4.4	---	1.8	---	32
Liberty (Snow Camp)		65		June 26, 1942	---	.01	7.8	4.1	10	52	2.1	7.0	---	4.3	---	36
Sweepsonville	23	408	Diorite	May 21, 1942	28	.00	32	12	33	177	17	26	.4	.0	233	129
<b>Guilford County:</b>																
Greensboro	33	274	Granite (?)	June 5, 1942	32	.00	59	13	21	181	48	30	.3	5.1	311	201
Jamestown	64	45	Granite	Sept. 18, 1942	38	.02	21	6.7	18	50	21	35	---	7.6	188	80
Oak Ridge		63		Sept. 17, 1942	22	.01	4.0	1.6	6.6	22	2	6	---	2.9	63	17
Summerfield	2	271½	Granite	Aug. 14, 1942	32	.02	23	4.1	12	116	2	2	---	.5	138	74



## Analyses of water from wells in the Piedmont section of the Cape Fear River Basin

(Continued)  
 Analyzed by the U. S. Geological Survey  
 (Well numbers correspond to the numbers in the tables of well data)

Location	Well no.	Depth (feet)	Aquifer	Date	Silica (SiO <sub>2</sub> ) (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium and potassium (Na+K)	Bicarbonate (HCO <sub>3</sub> )	Sulfate (SO <sub>4</sub> )	Chloride (Cl)	Fluoride (F)	Nitrate (NO <sub>3</sub> )	Dissolved solids	Total hardness as CaCO <sub>3</sub>
<b>Wake County:</b>															
Fuquay Springs	6	300	Gneiss	Sept. 25, 1947	50	31	3.1	11	116	8.8	6.4	.2	.0	171	90
do.	7	250	do.	Sept. 25, 1947	50	44	3.6	10	134	5.1	22	.2	.0	221	125
do.	8	400	do.	Sept. 25, 1947	49	24	2.6	8.5	88	13	2.1	.2	.0	148	71
<b>Coastal Plain section</b>															
<b>Duplin County:</b>															
Faison	1	200	Sand (Black Creek)	Feb. 10, 1947	29	15	2.0	6.7	61	5.1	3.1	.2	.0	96	46
do.	2	200	do.	Feb. 10, 1947	17	6.7	.9	6.5	25	7.0	4.6	.1	.0	56	20
Kenansville	3	198	do.	May 15, 1947	18	42	1.5	5.5	138	4.9	3.2	.1	.0	148	111
Rose Hill	4	186	do.	May 15, 1947	18	52	1.5	2.4	164	.5	4.2	.1	.1	166	136
Wallace	8	185	do.	May 15, 1947	22	62	4.8	3.6	211	1.4	5.0	.2	.3	213	174
<b>Moore County:</b>															
Vass		250	Schist	July 16, 1947	40	28	9.1	15	152	9.3	4.0	.2	.1	183	107
<b>New Hanover County:</b>															
Wrightsville Beach	16	160	Castle Hayne	May 8, 1947	17	51	15	127	216	24	186	.4	.0	532	189
do.	17	170	do.	May 8, 1947	18	49	14	62	216	6.6	92	.4	.6	354	180
do.	18	176	do.	May 8, 1947	16	52	13	71	220	6.7	106	.4	.6	378	183
<b>Onslow County:</b>															
Jacksonville	8	184	do.	Oct. 22, 1941	42	17	8.1		524	126	370	2.4	.5	1297	76
Holly Ridge	18	177	do.	Oct. 24, 1941	46	85	6.7	30	282	4.9	47	.8	.0	390	240
Pender County: Burgaw	1	220	Peedee	Dec. 23, 1941	--	42	9.1	66	326	4.1	10	.6	.0	319	142

Partial analyses of water from wells in the Piedmont section  
of Cape Fear River Basin

Analyzed by U. S. Geological Survey  
(Well numbers correspond to numbers in tables of well data)

(Parts per million)

Location	Well no.	Depth (feet)	Aquifer	Date	Iron (Fe)	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Fluo- ride (F)	Ni- trate (NO <sub>3</sub> )	Total hard- ness as CaCO <sub>3</sub>
<b>Alamance County:</b>											
Alamance	149	30		7/9/42	---	44	1	1	0.0	0.9	30
Mebane	18	58		6/30/42	---	320	2	165	---	.0	480
Swepsonville	38	89		6/2/42	---	55	1	2.5	---	.8	52
<b>Guilford County:</b>											
Greensboro	206			8/12/42	---	48	8	29	.0	19	86
Hillsdale	43	130		8/14/42	---	23	2	2	.0	3.2	21
<b>Rockingham County:</b>											
Reidsville	204	165		6/29/43	0.04	55	3	2	---	---	40

Partial analyses of water from wells in the Coastal Plain section  
of Cape Fear River Basin

Analyzed by U. S. Geological Survey  
(Well numbers correspond to numbers in tables of well data)  
(Parts per million)

Location	Well no.	Depth (feet)	Aquifer	Date	Iron (Fe)	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Fluo- ride (F)	Ni- trate (NO <sub>3</sub> )	Total hard- ness as CaCO <sub>3</sub>
<b>Bladen County:</b>											
Kings Bluff	6	80	Peedee	1/14/41	--	294	--	14	--	--	124
<b>Brunswick County:</b>											
Southport	2	120	Castle Hayne	1/15/41	--	253	--	44	--	--	180
<b>Duplin County:</b>											
Warsaw	7	120	Black Creek	1/18/44	--	145	4	4	--	--	94
<b>Hoke County:</b>											
Raeford	1	75	Tuscaloosa	1/21/44	--	6.0	2	3	--	--	14
<b>New Hanover County:</b>											
Sunset Park	9	140	Peedee	1/15/41	--	133	--	34	--	--	96
Carolina Beach	30	195	Castle Hayne	12/22/41	--	198	1	44	--	0.4	171
Fort Fisher	35	135	do.	1/8/42	--	210	1	21	--	0.6	162
Kure Beach	42	145- 194	do.	1/8/42	--	420	1	48	--	0.5	369
Wilmington	45	1330	?	12/20/41	--	383	440	7050	--	--	960



Partial analyses of water from wells in the Coastal Plain section  
of Cape Fear River Basin (Continued)

Analyzed by U. S. Geological Survey  
(Numbers correspond to numbers in tables of well data)  
(Parts per million)

Location	Well no.	Depth (feet)	Aquifer	Date	Iron (Fe)	Bicar- bonate (HCO <sub>3</sub> )	Sul- fate (SO <sub>4</sub> )	Chlo- ride (Cl)	Fluo- ride (F)	Ni- trate (NO <sub>3</sub> )	Total hard- ness as CaCO <sub>3</sub>
Onslow County:											
Swansboro	2	140	Duplin	9/3/41	--	231	1	20	0	0.5	192
Jacksonville	6	134	Castle Hayne	9/3/41	--	456	2	16	0	0.6	216
do.	3	200	do.	4/4/41	0.10	460	4	27	--	0.6	204
Dixon	16	528	Peedee	4/3/41	3.7	262	0	11	--	0	198
do.	17	170	Castle Hayne	4/3/41	3.9	271	0	11	0	--	201
Richlands	22	550	Peedee	9/3/41	--	271	3	3	0.6	--	36
Pender County:											
Currie	3	150	Peedee	1/14/41	--	441	-	31	--	--	7
Long Creek	4	165	do.	1/14/41	--	553	-	92	--	--	9
Sampson County:											
Clinton	2	267	Black Creek	1/18/44	--	61	7	4	.2	--	51

## Records of wells in the Cape Fear River Basin

## Piedmont section

Well no.	Location	Owner	Driller	Depth (feet)	Di- am- eter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
Alamance County									
5	Altamahaw	Altamahaw Mill	F. L. Smith	160	6	20	--	70	Greenstone schist
2	Ossippee	Ossippee Weaving Co.	Va. Mach. & Well Co.	335	10	35	--	40	do.
26	Mebane	Town	Sydnor Well Co.	735	8	--	--	25	Schist
28	Do.	Mebane Royal Co.	do.	189	8	38	--	30	do.
29	Do.	Fitch-Riggs Lumber Co.	C. R. Heater	97	6	60	--	20	do.
30	Do.	Mebane Yarn Mills, Inc.	-----	185	6	--	--	25	do.
49	Haw River	Travora Mfg. Co.	Heater Well Co.	61	8	50	15-20	20	Greenstone schist
50	Do.	Tabardrey Mfg. Co.	Va. Mach. & Well Co.	450	8	--	30	90	do.
51	Do.	do.	Sydnor Well Co.	600	8	--	47	74	do.
65	Hopedale	Copeland Fabric, Inc.	do.	470	8	--	--	30?	Granite
62	Burlington	Pepsi Cola Co.	F. L. Smith	162	6	30	--	84	Greenstone schist
78	Do.	Celanese Lanese Corp.	Sydnor Well Co.	390	8	--	50	60?	Granite
80	Do.	Cherokee Flooring Co.	Heater Well Co.	200	6	70	14	15	do.
113	Do.	May Hosiery Mills	Sydnor Well Co.	634	10-8	--	--	212	Granite (?)
124	Do.	Pure Oil Co.	F. L. Smith	73	6	65	13	25	Greenstone schist
126	Do.	Glen Raven Mill	do.	81	6	35	--	10	do.
129	Elon College	Caro. Bio. Supply Co.	Heater Well Co.	156	6	45	--	25+	Granite
132	Do.	Town	do.	300	8	80	50	150	Greenstone schist
133	Do.	do.	Va. Mach. & Well Co.	900	8	100	--	23	do.
134	Do.	Elon College	Heater Well Co.	140	8	--	--	25	do.
135	Do.	do.	do.	215	8	83	--	35	do.
139	Gibsonville	Town	F. L. Smith	335 $\frac{1}{2}$	8	91	53	112	do.
171	Sweptsonville	Virginia Mills Co.	Sydnor Well Co. ?	408	8	--	?	25+	Diorite
176	Do.	do.	Hudson Well Co.	65	6	20	--	10	do.
177	Do.	do.	do.	71	6	--	7 $\frac{1}{2}$	15	do.
194	Saxapahaw	Sellars Mfg. Co.	Heater Well Co.	168	6	40	--	30	Slate
195	Do.	do.	F. L. Smith	204	6	65	--	32	do.



Records of wells in the Cape Fear River Basin  
(Continued)

Piedmont section

Well no.	Location	Owner	Driller	Depth (feet)	Di- am- eter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
Chatham County									
1	Siler City	National Carbon Co.	Danville Well Co.	700	8	--	--	1½	Slate
2	Pittsboro	Town	Carolina Drilling Co.	100	6	--	--	24	do.
3	Do.	do.	-----	560	?	--	--	3	do. not used.
4	Do.	Chatham Mills	Carolina Drilling Co.	115	6	--	--	7½	Slate
5	Do.	do.	do.	115	6	--	--	13	do.
6	Merry Oaks	Royal Crown Co.	Heater Well Co.	90	6	10	--	8	Shale (Triassic)
7	Seaforth	Bell Chapel School	do.	125	6?	80	--	10	do.
Forsyth County									
125a	Kernersville	R. J. Reynolds Tobacco Co.	M. A. Holder	335	6	--	--	35	Granite
Guilford County									
18	Summerfield	School	J. R. Cummings	225	6	--	--	12-15	Granite
22	Do.	G. S. Miles	Walter Stafford	271½	2	40	40	16	do.
28	Do.	W. B. Stafford	J. Stafford	168	4	69	21	7	do.
47	Browns Summit	Dr. Wesley Taylor	Well Drillers, Inc.	186	6	--	--	3	do.
54	Do.	Negro School	F. L. Smith	68	6	--	--	30	Gneiss
55	Do.	Monticello School	-----	90	6	--	--	30	Granite
65	Do.	U. S. Army, Rifle Range	Va. Mach. & Well Co.	300	8	--	--	15	Greenstone schist
66	Do.	do.	do.	236	8	--	30	25	do.
70	Busick	Southern Webbing Mills	Heater Well Co.	185	8	40?	--	40	do.
96	Battleground	Shady Oak Dairy	do.	94	8	44	--	33	Gneiss
106	Oak Ridge	Military Institute	J. R. Cummings	78	6	35-40	30	50	do.
107	Do.	do.	do.	66	6	35-40	30	16	do.
110	Do.	do.	do.	200	6	--	--	10	Granite
112	Do.	do.	do.	700	6	--	--	7	do.
120	Colfax	Prison Camp	Va. Mach. & Well Co.	80	6	--	--	16	do.
121	Do.	do.	Heater Well Co.	141	6	99	--	20	do.
123	Friendship	Greensboro-High Point Airport	Danville Well Co.	123	6	--	21	52	Greenstone schist
129	Do.	Standard Oil Co.	Heater Well Co.	143	8	60	--	20	do.

Records of wells in the Cape Fear River Basin  
(Continued)

Piedmont section

Well no.	Location	Owner	Driller	Depth (feet)	Di- am- eter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
Guilford County (Continued)									
130	Friendship	Shell Oil Co.	Heater Well Co.	200	6	--	--	12	Greenstone schist
133	Do.	Plantation Pipeline	Va. Mach. & Well Co.	204	8	--	20	71	do.
153	Greensboro	Pomona Terra Cotta Co., Plant no. 2	W. B. Mayhew do.	120	3	80	--	18	do.
154	Do.	do., Plant no. 3		65 or 70	3	--	--	15	do.
156	Do.	Pomona Mills Co.	Va. Mach. & Well Co.	302½	8	--	--	60	do.
176	Do.	Mock, Judson, Voeh- ringer Co.	Sydnor Well Co.	438	8	--	50	200	do.
177	Do.	Vick Chemical Co.	do.	203	8	--	28	?	do.
178	Do.	Geo. C. Brown & Co.	Well Drillers, Inc.	120	6	--	--	15	do.
182	Do.	Colonial Stores, Inc.	L. R. Hartzell	55	4	--	--	10	Granite
197	Do.	Proximity Mfg. Co., White Oak Mill	-----	322	8?	--	--	55	Greenstone schist
198	Do.	do., Revolution Mill	Sydnor Well Co.	437	8	--	--	100	do.
199	Do.	Proximity Mfg. Co.	do.	402	8	60	--	100	do.
200	Do.	do., Print works	do.	100	8	--	--	100	do.
201	Do.	do., Hubbard St. Well	do.	282	8	--	17	180	do.
202	Do.	do., at Standpipe	do.	487	8	--	--	70	Granite (?)
203	Do.	do., Revolution Mill	do.	858	8	--	--	6	do
206	Do.	County Home	W. B. Mayhew	78	3	60	--	6	Granite
208	Do.	do.	Heater Well Co.	250	8	35	--	4	do.
209	Greensboro	County Home	Heater Well Co.	100	8	--	--	6	Granite
210	Do.	County Dairy Farm	J. R. Cummings	700	6	--	--	2	do.
212	Do.	Prison Camp	W. B. Mayhew	120	2	--	30	7	do.
214	Do.	Home Ice Plant	Heater Well Co.	200	6	74	10	24	do.
215	Do.	Woodland Dairy Farm	Danville Well Co.	256	6	--	20	30	Greenstone schist
229	Gibsonville	Mineola Mfg. Co.	Sydnor Well Co.	557	8	207	--	5	do.
230	Do.	do.	do.	436	10	80	70	65	do.
231	Do.	do.	F. L. Smith	204	6	41	50	50	do.
232	Do.	do.	do.	300	6	65	--	30	do.
234	Do.	Town	Sydnor Well Co.	201	8	185	--	90	do.
243a	Do.	Rock Creek Dairy	F. L. Smith	54	6	44	--	20	do.



Records of wells in the Cape Fear River Basin  
(Continued)

Piedmont section

Well no.	Location	Owner	Driller	Depth (feet)	Di- am- eter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
Guilford County (Continued)									
286	Greensboro	Am. Agr. Chem. Co.	Sydnor Well Co.	433	8	90	30	35	Greenstone schist
287	Do.	Caro. By-Products Co.	do.	521	8	--	--	100	do.
288	Do.	do.	do.	299	8	50	--	13	do.
290	Do.	Armour & Co.	Danville Well Co.	271	6	75	10	60	do.
292	Do.	WCBG Radio Station	Heater Well Co.	58	6	43	--	20	do.
301	Sedgefield	Pilot Life Ins. Co.	Sydnor Well Co.	308	8	--	--	65	do.
303	Do.	Bowmans Dairy	J. R. Cummings	375	4	--	--	30-40	do.
311	High Point	Lindale Dairy Farm	F. L. Smith	240	6	32	10	30	Granite (?)
320	Do.	Adams Millis Corp.	-----	120	4	--	40	50	Greenstone schist
321	Do.	do.	-----	124	6	--	35	75	do.
323	Do.	Cloverbrand Creamery	J. R. Cummings	96	6	--	--	13	do.
325	Do.	Highlands Cotton Mills, Inc.	-----	190	6	100	--	12	Slate (?)
327	Do.	Colonial Stores, Inc.	L. R. Hartsell	68	4	--	--	15	Greenstone schist
328	Do.	Logan Porter Mirror Co.	do.	75	6	--	25	100	do.
329	Do.	Slane Hosiery Mill	Heater Well Co.	160	6	--	--	120	do.
330	Do.	Crown Hosiery Mill	-----	240	8	--	20	200	do.
343	Oakdale	Oakdale Cotton Mills	W. B. Mayhew	45	2	--	--	10	Granite
351	Pleasant Garden	Cone Country Club	do.	65	3	6	--	15	do.
353	Do.	W. B. Ross, Dairy	do.	110	3	80	--	12	Greenstone schist
354	Do.	School	do.	120	2	80	--	5-6	do.

Harnett County

1	Angier	Town	Heater Well Co.	292	8	120	--	80	Slate
2	Do.	do.	do.	250	8	--	--	60	do.
3	Lillington	Town	do.	291	8	33	--	90	do.
4	Do.	do.	Sydnor Well Co.	300+	8	--	--	25	do.
5	Do.	do.	Heater Well Co.	305	8	--	--	24	do.
6	Do.	Prison Camp	do.	85	6	63	--	35	do.
7	Do.	Ice Plant	do.	295	6	--	--	30+	do.
8	Do.	Town	do.	460	8	--	--	47	do.

Records of wells in the Cape Fear River Basin  
(Continued)

Piedmont section

Well no.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
Randolph County									
1	Ramseur	Columbia Mfg. Co.	-----	287	6?	---	---	16	Slate
2	Do.	Ramseur Furn. Co.	-----	100	6	---	---	10+	do.
3	Cedar Falls	Sapona Mfg. Co.	Va. Mach. & Well Co.	300	8-6	---	88	37	Slate; quartz veins
4	Do.	Jordan Spinning Co.	-----	300	6	---	---	15+	do.
5	Worthville	Leward Cotton Mills	Heater Well Co.	234	6	---	---	20	do.
6	Randleman	Commonwealth Hosiery Mills	do.	180	6	---	---	20	do.
7	Do.	Randleman Mills	-----	160	6	---	---	10	do.
8	Do.	do.	-----	170	6	---	---	10	do.
9	Franklinville	Randolph Mills	Heater Well Co.	98	6	---	---	30	do.
10	Do.	do.	do.	69	6	4	---	10	do.
11	Do.	do.	-----	60	6	---	---	8-10	do.
12	Do.	do.	Heater Well Co.	109	6	---	---	3	do.
13	Liberty	Town	Va. Mach. & Well Co.	238	8	---	---	100	Greenstone schist
14	Do.	do.	-----	360	8	---	---	60	do.
15	Do.	do.	-----	175	6	---	---	60	do.
16	Do.	Greyson Mfg. Co.	-----	80	2	---	---	10	do.
17	Do.	Stout Chair Co.	-----	60	2	---	---	6	do.
Rockingham County									
1	Bethany	Melrose Stock Farm	Danville Well Co.	170	6	---	---	1 1/2	Gneiss
2	Do.	do.	do.	74 1/2	6	---	---	10	do.
3	Monroeton	School	do.	165	8	---	---	15+	do.
4	Reidsville	Edna Mills Corp.	-----	160+	6	---	15	30	do.
5	Do.	Pine Hill Dairy	C. H. Davis	228	6	---	---	1-2	do.
6	Do.	do.	F. L. Smith	165	6	---	30	35	do.
7	Thompsonville	School	Danville Well Co.	210	6	---	---	35?	do.
Wake County									
1	Apex	T. L. Williams	Heater Well Co.	118	6	---	36	15	Gneiss
2	Do.	Town	do.	1083	8	---	---	6	Sandstone and shale (Triassic)



Records of wells in the Cape Fear River Basin  
(Continued)

Piedmont section

Well no.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
Wake County (Continued)									
3	Apex	W. A. Lewter	Heater Well Co.	112	6	21	---	15	Sandstone and shale (Triassic)
4	New Hill	T. E. Gardner	do.	83	--	--	---	10	Sandstone
5	Do.	L. A. Goodwin	do.	90	6	26	---	--	do. (Triassic)
6	Fuquay Springs	Town	Danville Well Co.	300	8	30	25	65	Gneiss
7	Do.	do.	C. R. Heater	250	6	30	30	60	do.
8	Do.	do.	Heater Well Co.	400	8	30	30	75	do.
9	Do.	do.	do.	385	8	--	---	330	do.
10	Holly Springs	John Mills	Heater Well Co.	80	6	40	---	10	Sandstone (Triassic)
11	Do.	J. H. Smith	do.	70	5	33	---	8	do.

Coastal Plain Section

Bladen County

1	Elizabethtown	Town	Car. Drilling Co.	199	*24-8	--	68R	150	Sand (Black Creek)
2	Jones Lake	N. C. Dept. Cons.	do.	334	6	327	15R	15	Sand (Tusca-loosa)
3	Do.	do.	-----	37	1 $\frac{1}{4}$	33	---	--	327 - 334 feet Water contains much iron.
4	White Lake	Goldstons Beach	Car. Drilling Co.	240	6	240	---	--	Sand (Black Creek)
5	Do.	Do.	-----	47	1 $\frac{1}{4}$	--	---	--	Water in coarse sand.
6	Kings Bluff	U. S. Engineers	-----	80	6?	--	---	--	Sand (Peedee)

\* Gravel-walled well.

Records of wells in the Cape Fear River Basin  
(Continued)

Coastal Plain Section

Well no.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
Brunswick County									
1	Southport, 3 miles N of	A. W. Moore	-----	110	1 1/4	110	15R	1-2	Hard water; contains some iron.
2	Southport	Town	-----	120	8	---	---	150	Shell rock (Castle Hayne)
3	Do.	do.	-----	110	12	---	---	50	do.
4	Do.	Ice Plant	Heater Well Co.	100	6	50	---	40+	do.
5	Fort Caswell, 2 miles W of	U. S. Government	-----	125	6	---	---	---	Four wells yield 200 gallons a minute to suction pump.
6	Fort Caswell	do.	-----	1543	10?	---	flows	---	Flows into swimming pool.

Cumberland County

1	Spring Lake	Town	Heater Well Co.	75	8	---	---	40	Sand (Tuscaloosa)
2	Do.	do.	do.	75	8	---	---	40	350 feet from well l.
3	Fort Bragg	U. S. Army	Car. Drilling Co.	312	6	135	---	30	Schist

Duplin County

1	Faison	Town	Va. Mach. & Well Co.	200	8	200	---	90	Sand (Black Creek)
2	Do.	do.	do.	200	8	200	---	100	do.
3	Kenansville	do.	T. W. Callahan	198	8	138+60	22R	200	do.
4	Rose Hill	do.	Sydnor Well Co.	186	8	100?	---	150	do.
5	Warsaw	do.	Va. Mach. & Well Co.	77	8	---	32R	40	do.
6	Do.	do.	do.	118	8	---	---	80	do.
7	Do.	do.	Sydnor Pump & Well Co.	120+	8	---	---	80	do.
8	Wallace	do.	J. R. Connelly	185	8	---	---	100	do.



Records of wells in the Cape Fear River Basin  
(Continued)

Coastal Plain Section

Well no.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
Duplin County (Continued)									
9	Wallace	Town	?	?	--	--	--	--	?
10	Magnolia	Double Trouble Farms	do.	145	8	140	--	100	Sand (Black Creek)
Hoke County									
1	Raeform	Town	Va. Mach. & Well Co.	75	12	65+10	25R	100	Sand (Tuscaloosa)
2	Do.	do.	do.	75	12	65+10	--	100	do.
3	Sanatorium	State of North Carolina	do.	250	8	239+15	100R	100	do.
4	Do.	do.	Car. Drill. & Eq. Co.	284	*24-8	284	--	100	do.
5	Do.	do.	do.	299	*29-8	295	--	50	do.
New Hanover County									
1	Wilmington	Carolina Shipbuilding Co.	Va. Mach. & Well Co.	103	10-8	81+22	28	300	Shell rock (Peedee)
2	Do.	do.	do.	105	10	85+20	--	200	do.
3	Do.	do.	Sydnor Well Co.	135½	10	107+28½	21	250	do.
4	Do.	do.	do.	123	10	71+48	20	275	do.
5	Do.	do.	do.	130½	10	58+62	21	300	do.
6	Do.	do.	do.	129	10	65+54	18	346	do.
9	Sunset Park	The Sunset Co., Inc.	T. W. Callahan	140	6	80±	--	132	do.
10	Do.	do.	do.	140	6	--	--	150	do.
11	Do.	do.	do.	140	6	80±	--	126	do.
12	Do.	do.	do.	143	4½	80±	51	60	do.
13	Do.	do.	Wilmington Pump & Well Co.	112	8	--	30	150	do.
14	Do.	do.	-----	91	6	--	36.7	150	do.
15	Wilmington	Wilmington Housing Authority	Heater Well Co.	175	10-6-5/8	73+109	9.3	150	Shell rock and sand (Peedee)
16	Do.	do.	do.	186	10-8	64+120	48.8	150	do.

Records of wells in the Cape Fear River Basin  
(Continued)

Coastal Plain Section

Well no.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
New Hanover County (Continued)									
17	Wilmington	N. Y. A. Center	Wilmington Pump & Well Co.	187	6	185	---	280	Shell rock and sand (Peedee)
26	Wrightsville Beach	City	-----	160	12-8	125	---	150	do.
27	Do.	do.	Car. Drill. & Eq. Co.	170	10-8	125	---	250	Shell rock and sand (Castle Hayne)
28	Do.	do.	do.	176	10	146	---	300	do.
29	Carolina Beach	do.	-----	200	8	---	---	150	do.
30	Do.	do.	Car. Drill. & Eq. Co.	195	8	125	---	300	do.
31	Do.	do.	do.	200	8	---	2	---	do.
35	Fort Fisher	U. S. Army	Wilmington Pump & Well Co.	135	6	---	15R	239	Shell rock (Castle Hayne)
36	Do.	do.	do.	177	8	62	14R	275	do.
37	Do.	do.	do.	207	8	83	18	250	do.
38	Do.	do.	do.	177	8	81	17½	250	do.
39	Kure Beach	L. C. Kure	Kure Brothers	186	8	---	---	75±	do.
41	Do.	do.	Wilmington Pump & Well Co.	196	8	120±	27R	75±	do.
42	Do.	Ethyl-Dow Chem. Co.	T. W. Callahan	145-194	8-4	70-105	---	140-150	do.; 6 wells.
44	Wilmington	Texas Oil Co.	-----	120	6	---	40	100	Shell rock and sand (Peedee)
45	Do.	City	-----	1330	12-6	---	flows	---	Brackish water at 379 feet to bottom of hole.
46	Do.	Boyle Ice Co.	-----	65	8	---	---	650	Shell rock and sand (Peedee)
47	Do.	Independent Ice Co.	-----	120	12	75	---	325	do.
49	Do.	Wilmington Cold Storage Co.	-----	104	10	---	18R	300	do.



Records of wells in the Cape Fear River Basin  
(Continued)

Coastal Plain Section

Well no.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
New Hanover County (Continued)									
63	Wilmington	McMillan & Cameron Co.	Wilmington Pump & Well Co.	80	4	67	16R	100	Shell rock (Peedee)
70	Wrightsboro	G. W. Trask & Sons	do.	93½	8	57	---	250	do.
71	Do.	Swart Dairy	do.	90	6	4	---	---	do.
72	Do.	do.	do.	367	8	309	0.5	30	Sand (Peedee) chloride 3,000 p.p.m.
74	Do.	Bluethenthal Field	do.	105	8	65	15	211	Shell rock (Peedee)
75	Do.	do.	do.	102	8	93	17½	300	do.
76	Do.	do.	do.	96	8	74	8	343	do.
Onslow County									
1	Swansboro	Town	Va. Mach. & Well Co.	189	8	90½	17	250	Shell rock (Duplin)
2	Do.	S. F. Milsted (ice plant)	Milsted	140	3	85	+2	100	Shell rock (Duplin)
3	Jacksonville	Town	A. L. Lupton	200	4	198	+3 )	150	Shell rock (Castle Hayne)
4	Do.	do.	-----	190+	3	180	+3 )		Two wells flowed 150 gallons a minute in 1941.
5	Do.	do.	J. R. Connelly	185½	8	153	0	300	Shell rock (Castle Hayne)
6	Do.	Nite Spot Cafe	M. Hudson	134	6	152	+9	140	Do., flowing 140 gallons a minute August 1941.
7	Camp Lejeune Tent Camp, Well A	U. S. Marines	Va. Mach. & Well Co.	182	10	107	4	542	Shell rock (Castle Hayne)

Records of wells in the Cape Fear River Basin  
(Continued)

Coastal Plain Section

Well no.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
Onslow County (Continued)									
8	Camp Lejeune Tent Camp, Well E	U. S. Marines	Va. Mach. & Well Co.	184	10	110	4	400	Shell rock (Castle Hayne)
9	Do., Well B	do.	Layne Atlantic Co.	66	18	24	7	75	Shell rock (Trent)
10	Do., Well F	do.	do.	76	18	27½	6	188	do.
11	Camp Lejeune Rifle Range, Well S	do.	do.	130	*18-8	130	44	150	Shell rock and sand (Trent ?)
12	Do., Well T	do.	do.	452	*18-8	152	35	200	Sand and limestone (Peedee ?)
13	Camp Lejeune Main Base, Well 1	do.	do.	195	*18-8	195	9	250	Sand and shell rock (Trent and Castle Hayne)
14	Do., Well 13	do.	do.	150	*18-8	150	12	250	do.
15	Do., average of 21 wells	do.	do.	167	*18-8	167	---	220	do.
16	Dixon	School	-----	528	---	---	---	---	---
17	Do.	L. F. Dixon	-----	170	---	---	---	---	---
18	Holly Ridge	Town	Va. Mach. & Well Co.	180	8	138	38	330	Shell rock (Castle Hayne)
19	Camp Davis, Well 1	U. S. Army	do.	177	8	112	35	220	do.
20	Do., Well 11	do.	do.	175	8	---	30	220	do.
21	Do., average of 14 wells	do.	do.	177.4	8	119.7	29.9	220	Do., average drawdown 3.3 feet at 220 gallons a minute.
22	Richlands	Town	Sydnor Pump & Well Co.	550	8	550	---	100	Sand (Peedee)



Records of wells in the Cape Fear River Basin  
(Continued)

Coastal Plain Section (Continued)  
Pender County

Well no.	Location	Owner	Driller	Depth (feet)	Diameter (inches)	Depth of casing (feet)	Depth to water level	Yield (gallons per minute)	Aquifer and remarks
Pender County									
1	Burgaw	Town	Car. Drill. & Eq. Co.	220	*24-8	220	20	150	Sand (Peedee)
2	State Exp. Farm	North Carolina	do.	109	6?	---	---	60	do.
3	Currie	Moore's Creek National Park	T. W. Callahan	150	2	120?	+16 flows	12 (flows)	do.
4	Long Creek	Consolidated School	Roy Hilburn	175	2	---	---	5	do.
5	Hamstead	Z. R. Thompson	Quinn	80	1 $\frac{1}{4}$	---	17	---	Shell rock (Castle Hayne)
6	Topsail Inlet	U. S. Army	Heater Well Co.	235	6-4 $\frac{1}{2}$	158	flows	71.5	Shell rock (Eocene)
7	Atkinson	High School	Roy Hilburn	120	3 $\frac{1}{2}$ -2	120	22	---	Limestone (Peedee)
8	Do.	Blueberry Farm	Car. Drill. & Eq. Co.	310	*24-8	310*	---	600	Sand (Black Creek)
9	Burgaw	Ice Plant	Heater Well Co.	70	6?	Screen	---	70	Sand (Peedee)
10	Holly Shelter	N.C. Dept. of Game and Inland Fisheries	Mitchell Pump and Well Co.	300	6	287	30	2	Limestone (?) (Black Creek)
11	Do.	do.	-----	70	4	---	---	12	Brackish water. Sand (Peedee)
Sampson County									
1	Clinton	Town	Car. Drill & Eq. Co.	260	*24-8	---	---	350	Sand (Black Creek)
2	Do.	do.	do.	267	*24-8	---	---	600	do.
3	Do.	do.	Layne Atlantic Co.	297	*26-13	297*	27	401	Do., not used, screen broke.
4	Roseboro	Town	R. D. Cole	190	6	---	---	250	Sand (Tuscaloosa (?)); not used; water reported to contain sulfur.
5	Do.	do.	-----	45 to 48	1 $\frac{1}{4}$	45 to 48	---	120	Sand (Black Creek) 14 driven wells, & 5 foot strainer point; water contains much iron.





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